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NEWS 3 Jan 29 FSTA has been reloaded and moves to weekly updates
NEWS 4 Feb 01 DKILIT now produced by FIZ Karlsruhe and has a new update
frequency
NEWS 5 Feb 19 Access via Tymnet and SprintNet Eliminated Effective 3/31/02
NEWS 6 Mar 08 Gene Names now available in BIOSIS
NEWS 7 Mar 22 TOXLIT no longer available
NEWS 8 Mar 22 TRCTHERMO no longer available
NEWS 9 Mar 28 US Provisional Priorities searched with P in CA/CAplus
and USPATFULL
NEWS 10 Mar 28 LIPINSKI/CALC added for property searching in REGISTRY
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NEWS 16 Apr 22 Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
NEWS 17 Apr 22 BIOSIS Gene Names now available in TOXCENTER
NEWS 18 Apr 22 Federal Research in Progress (FEDRIP) now available
NEWS 19 Jun 03 New e-mail delivery for search results now available
NEWS 20 Jun 10 MEDLINE Reload
NEWS 21 Jun 10 PCTFULL has been reloaded

NEWS EXPRESS February 1 CURRENT WINDOWS VERSION IS V6.0d,
CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP),
AND CURRENT DISCOVER FILE IS DATED 05 FEBRUARY 2002
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********** STN Columbus **********

FILE 'HOME' ENTERED AT 15:16:46 ON 16 JUN 2002

=> file medline biosis caplus
COST IN U.S. DOLLARS SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST 0.21 0.21

FILE 'MEDLINE' ENTERED AT 15:17:03 ON 16 JUN 2002

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FILE 'CAPLUS' ENTERED AT 15:17:03 ON 16 JUN 2002
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=> e raav
E1 1 RAAUMES/BI
E2 3 RAAUU/BI
E3 1040 --> RAAV/BI
E4 2 RAAV01/BI
E5 2 RAAV02/BI
E6 4 RAAV1/BI
E7 33 RAAV2/BI
E8 2 RAAV2BETAGAL/BI
E9 3 RAAV3/BI
E10 3 RAAV4/BI
E11 2 RAAV4BETAGAL/BI
E12 9 RAAV5/BI

=> s raav
L1 1040 RAAV

=> s recombinant aav
L2 622 RECOMBINANT AAV

=> adeno!associated virus
ADENO!ASSOCIATED IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter "HELP COMMANDS" at an arrow prompt (=>).

=> s adeno!associated virus
L3 0 ADENO!ASSOCIATED VIRUS

=> s adeno-associated
L4 5747 ADENO-ASSOCIATED

=> e adeno-associated
E1 1 ADENNOVIRUS/BI
E2 25936 ADENO/BI
E3 0 --> ADENO-ASSOCIATED/BI
E4 3 ADENO12/BI
E5 5 ADENO2/BI
E6 1 ADENO29/BI
E7 1 ADENO3/BI
E8 1 ADENO40/BI
E9 3 ADENO5/BI
E10 2 ADENOA/BI
E11 1 ADENOACACANTHOMA/BI
E12 2 ADENOACANTHOCARCINOMA/BI

=> d his

(FILE 'HOME' ENTERED AT 15:16:46 ON 16 JUN 2002)

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 15:17:03 ON

16 JUN 2002
E RAAV
L1 1040 S RAAV
L2 622 S RECOMBINANT AAV
L3 0 S ADENO!ASSOCIATED VIRUS
L4 5747 S ADENO-ASSOCIATED
E ADENO-ASSOCIATED

=> d protease inhibitor
'PROTEASE' IS NOT A VALID FORMAT
'INHIBITOR' IS NOT A VALID FORMAT
In a multifile environment, a format can only be used if it is valid in at least one of the files. Refer to file specific help messages or the STNGUIDE file for information on formats available in individual files.
REENTER DISPLAY FORMAT FOR ALL FILES
(FILEDEFAULT):end

=> s protease inhibitor
L5 56882 PROTEASE INHIBITOR

=> e proteinase inh
E1 1 PROTEINASCS/BI
E2 95886 PROTEINASE/BI
E3 0 --> PROTEINASE INH/BI
E4 3 PROTEINASE1/BI
E5 10 PROTEINASE3/BI
E6 2 PROTEINASEAKTIVITAT/BI
E7 1 PROTEINASEAND/BI
E8 1 PROTEINASEBOUND/BI
E9 3 PROTEINASEE/BI
E10 2 PROTEINASEES/BI
E11 1 PROTEINASEGENE/BI
E12 2 PROTEINASEHEMMER/BI

=> s proteinase inhibitor
L6 30433 PROTEINASE INHIBITOR

=> d his

(FILE 'HOME' ENTERED AT 15:16:46 ON 16 JUN 2002)

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 15:17:03 ON 16 JUN 2002
E RAAV
L1 1040 S RAAV
L2 622 S RECOMBINANT AAV
L3 0 S ADENO!ASSOCIATED VIRUS
L4 5747 S ADENO-ASSOCIATED
E ADENO-ASSOCIATED
L5 56882 S PROTEASE INHIBITOR
E PROTEINASE INH
L6 30433 S PROTEINASE INHIBITOR

=> s l5 or l6
L7 81516 L5 OR L6

=> s l1(s)l6
L8 1 L1(S) L6

=> d ti so

L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS
TI Compounds and methods to enhance recombinant adeno-associated virus (rAAV)
transduction for gene therapy
SO PCT Int. Appl., 127 pp.
CODEN: PIXXD2

=> s l2(s)l6
L9 0 L2(S) L6

=> s l4(s)l6
L10 1 L4(S) L6

=> d ti so

L10 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS
TI Compounds and methods to enhance recombinant adeno-associated virus (rAAV)
transduction for gene therapy
SO PCT Int. Appl., 127 pp.
CODEN: PIXXD2

=> s l1 and l6
L11 1 L1 AND L6

=> s l2 and l6
L12 0 L2 AND L6

=> s l4 and l6
L13 9 L4 AND L6

=> dup rem l13
PROCESSING COMPLETED FOR L13
L14 9 DUP REM L13 (0 DUPLICATES REMOVED)

=> d ti so 1-9

L14 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2002 ACS
TI Synthetic internal ribosome entry sites and other sequences improving the
efficiency of translation and their identification in random oligonucleotide libraries
SO PCT Int. Appl., 168 pp.
CODEN: PIXXD2

L14 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2002 ACS
TI Gene transfer vectors for treating autoimmune diseases and diseases with
immunopathogenesis
SO PCT Int. Appl., 82 pp.
CODEN: PIXXD2

L14 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2002 ACS
TI Human serine protease inhibitor headpin and its gene and diagnostic and
therapeutic uses
SO PCT Int. Appl., 213 pp.
CODEN: PIXXD2

L14 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2002 ACS
TI Gene transfer to intervertebral disc cells, and use in the treatment of degenerative disk disorders, and animal model for degenerative disk disease
SO U.S. Pat. Appl. Publ., 16 pp.
CODEN: USXXCO

L14 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2002 ACS
TI Compounds and methods to enhance recombinant **adeno-associated** virus (rAAV) transduction for gene therapy
SO PCT Int. Appl., 127 pp.
CODEN: PIXXD2

L14 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2002 ACS
TI Novel methods for in vivo identification of enzyme inhibitors from random
peptide-chymotrypsin inhibitor 2A (CI-2A) fusion library and their use in
drug screening
SO PCT Int. Appl., 136 pp.
CODEN: PIXXD2

L14 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2002 ACS
TI Viral vectors to inhibit leukocyte infiltration or cartilage degradation of joints

SO U.S., 72 pp., Cont.-in-part of U.S. Ser. No. 685,212.
CODEN: USXXAM

L14 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2002 ACS
TI Preparation of transgenic birds by gene transfer with p95-specific gene
techniques
SO Ger. Offen., 8 pp.
CODEN: GWXXBX

L14 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2002 ACS
TI Polynucleotide constructs with cis-acting regulatory sequence and effector
gene in therapies for infection and hyperproliferative disorders
SO PCT Int. Appl., 61 pp.
CODEN: PIXXD2

=> d ibib ab 5,3,2

L14 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:881351 CAPLUS
DOCUMENT NUMBER: 134:46764
TITLE: Compounds and methods to enhance recombinant **adeno-associated** virus (rAAV) transduction for gene therapy
INVENTOR(S): Engelhardt, John F.; Duan, Dongsheng
PATENT ASSIGNEE(S): University of Iowa Research Foundation, USA
SOURCE: PCT Int. Appl., 127 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000075365	A2	20001214	WO 2000-US15700	20000608
WO 2000075365	A3	20010301		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1190249	A2	20020327	EP 2000-944624	20000608

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

PRIORITY APPLN. INFO.: US 1999-138188P P 19990608
US 2000-201089P P 20000502
WO 2000-US15700 W 20000608
OTHER SOURCE(S): MARPAT 134:46764
AB Agents and methods to alter rAAV transduction are provided.

L14 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:168148 CAPLUS
DOCUMENT NUMBER: 134:218930
TITLE: Human serine protease inhibitor headpin and its gene and diagnostic and therapeutic uses
INVENTOR(S): Clayman, Gary L.; Nakashima, Torahiko; Spring, Paul M.
PATENT ASSIGNEE(S): Board of Regents, the University of Texas System, USA
SOURCE: PCT Int. Appl., 213 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001016324	A2	20010308	WO 2000-US24214	20000831
WO 2001016324	A3	20020307		

W: CA, JP
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

EP 1210433	A2	20020605	EP 2000-959826	20000831

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY

PRIORITY APPLN. INFO.: US 1999-151776P P 19990831
WO 2000-US24214 W 20000831
AB The present invention describes a novel gene encoding a novel protein termed headpin (for head and neck serpin) that is homologous to known serine protease inhibitors. Headpin is a differentially expressed, novel serine **proteinase inhibitor** that belongs to the ov-serpin family and demonstrates a hinge region consensus sequence that predicts an inhibitory function. Headpin was cloned from a keratinocyte cDNA library, and its expression pattern by Northern blot anal. indicates that it is most likely produced by keratinizing epithelium. The endogenous expression headpin in normal oral keratinocytes, and its absence or down-regulation in squamous cell carcinoma of the oral cavity, supports the involvement of headpin as a marker for squamous differentiation or a gene disadvantageous to tumor function. Headpin has been grouped into the cluster of serpins located at chromosome 18q21.3/18q22. This region is a known area for loss of heterozygosity and other deletional events often assocd. with head and neck cancer. The invention describes methods and compns. of the nucleic acids, encoded proteins, antibodies, pharmaceuticals, cancer treatments, diagnostics and screens for modulators of headpin.

L14 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:284082 CAPLUS
DOCUMENT NUMBER: 134:306211
TITLE: Gene transfer vectors for treating autoimmune diseases and diseases with immunopathogenesis
INVENTOR(S): Schwarzmann, Fritz
PATENT ASSIGNEE(S): Germany
SOURCE: PCT Int. Appl., 82 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001027254	A2	20010419	WO 2000-DE3608	20001012
WO 2001027254	A3	20020228		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,
YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,
CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.: DE 1999-19948983 A 19991012
AB The invention relates to a gene transfer vector comprising a first nucleic
acid sequence which codes for one or more ligands that trigger apoptosis,
a second nucleic acid sequence which codes for one or more antigens, and,
optionally, a third nucleic acid sequence which codes for one or more
anti-apoptosis mols., and optionally, a fourth nucleic acid sequence which
codes for one or more suicide enzymes.

=> s transduction
L15 281838 TRANSDUCTION

=> d his

(FILE 'HOME' ENTERED AT 15:16:46 ON 16 JUN 2002)

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 15:17:03 ON 16 JUN 2002
E RAAV
L1 1040 S RAAV
L2 622 S RECOMBINANT AAV
L3 0 S ADENO!ASSOCIATED VIRUS
L4 5747 S ADENO-ASSOCIATED
E ADENO-ASSOCIATED
L5 56882 S PROTEASE INHIBITOR
E PROTEINASE INH
L6 30433 S PROTEINASE INHIBITOR
L7 81516 S L5 OR L6
L8 1 S L1(S)L6
L9 0 S L2(S)L6
L10 1 S L4(S)L6
L11 1 S L1 AND L6
L12 0 S L2 AND L6
L13 9 S L4 AND L6
L14 9 DUP REM L13 (0 DUPLICATES REMOVED)
L15 281838 S TRANSDUCTION

=> s l7(s)l15
L16 324 L7(S) L15

=> s adeno?
L17 677499 ADENO?

=> s l16 and l17
L18 7 L16 AND L17

=> dup rem l18
PROCESSING COMPLETED FOR L18
L19 7 DUP REM L18 (0 DUPLICATES REMOVED)

=> d ti so 1-7

L19 ANSWER 1 OF 7 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Intercellular transfer of functional CD40-ligand on B cells.
SO Blood, (November 16, 2001) Vol. 98, No. 11 Part 1, pp. 23a. http://www.bloodjournal.org/. print.
Meeting Info.: 43rd Annual Meeting of the American Society of Hematology,
Part 1 Orlando, Florida, USA December 07-11, 2001
ISSN: 0006-4971.

L19 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2002 ACS
TI Compounds and methods to enhance recombinant **adeno**-associated virus (rAAV) transduction for gene therapy
SO PCT Int. Appl., 127 pp.
CODEN: PIXXD2

L19 ANSWER 3 OF 7 MEDLINE
TI The serine proteinase inhibitor (serpin) plasminogen activation inhibitor
type 2 protects against viral cytopathic effects by constitutive interferon alpha/beta priming.
SO JOURNAL OF EXPERIMENTAL MEDICINE, (1998 Jun 1) 187 (11) 1799-811.
Journal code: 2985109R. ISSN: 0022-1007.

L19 ANSWER 4 OF 7 MEDLINE
TI Multiple intracellular pathways interfere with the activation of a CPP32-like protease induced by serum deprivation of AKR-2B cells.
SO EXPERIMENTAL CELL RESEARCH, (1998 Apr 10) 240 (1) 28-39.
Journal code: 0373226. ISSN: 0014-4827.

L19 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2002 ACS
TI Apoptosis signaling pathways in normal T cells. Differential activity of
Bcl-2 and IL-1.beta.-converting enzyme family protease inhibitors on glucocorticoid- and Fas-mediated cytotoxicity
SO J. Immunol. (1996), 157(9), 3845-3849
CODEN: JOIMA3; ISSN: 0022-1767

L19 ANSWER 6 OF 7 MEDLINE
TI Chronic oral administration of synthetic trypsin inhibitor camostate reduces amylase release from isolated rat pancreatic acini.
SO INTERNATIONAL JOURNAL OF PANCREATOLOGY, (1995 Oct) 18 (2) 135-43.
Journal code: 8703511. ISSN: 0169-4197.

L19 ANSWER 7 OF 7 MEDLINE
TI Oligosaccharide signaling in plants. Specificity of oligouronide-enhanced
plasma membrane protein phosphorylation.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1991 Feb 15) 266 (5) 3140-5.
Journal code: 2985121R. ISSN: 0021-9258.

=> d ibib ab 3,4

L19 ANSWER 3 OF 7 MEDLINE
ACCESSION NUMBER: 1998270910 MEDLINE
DOCUMENT NUMBER: 98270910 PubMed ID: 9607921
TITLE: The serine proteinase inhibitor (serpin) plasminogen activation inhibitor type 2 protects against viral cytopathic effects by constitutive interferon alpha/beta priming.
AUTHOR: Antalis T M; La Linn M; Donnan K; Mateo L; Gardner J;
Dickinson J L; Buttigieg K; Suhrbier A
CORPORATE SOURCE: Queensland Cancer Fund Experimental Oncology Unit, The
Queensland Institute of Medical Research, Brisbane 4029, Australia.. toniA@qimr.edu.au
SOURCE: JOURNAL OF EXPERIMENTAL MEDICINE, (1998 Jun 1) 187 (11)
1799-811.

Journal code: 2985109R. ISSN: 0022-1007.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199807
ENTRY DATE: Entered STN: 19980713
Last Updated on STN: 19980713
Entered Medline: 19980701
AB The serine **proteinase inhibitor** (serpin) plasminogen activator inhibitor type 2 (PAI-2) is well characterized as an inhibitor of extracellular urokinase-type plasminogen activator. Here we show that intracellular, but not extracellular, PAI-2 protected cells from the rapid cytopathic effects of alphavirus infection. This protection did not appear to be related to an effect on apoptosis but was associated with a PAI-2-mediated induction of constitutive low-level interferon (IFN)-alpha/beta production and IFN-stimulated gene factor 3 (ISGF3) activation, which primed the cells for rapid induction of antiviral genes. This primed phenotype was associated with a rapid development of resistance to infection by the PAI-2 transfected cells and the establishment of a persistent productive infection. PAI-2 was also induced in macrophages in response to viral RNA suggesting that PAI-2 is a virus response gene. These observations, together with the recently demonstrated PAI-2-mediated inhibition of tumor necrosis factor-alpha induced apoptosis, (a) illustrate that PAI-2 has an additional and distinct function as an intracellular regulator of signal **transduction** pathway(s) and (b) demonstrate a novel activity for a eukaryotic serpin.

L19 ANSWER 4 OF 7 MEDLINE
ACCESSION NUMBER: 1998233454 MEDLINE
DOCUMENT NUMBER: 98233454 PubMed ID: 9570918
TITLE: Multiple intracellular pathways interfere with the activation of a CPP32-like protease induced by serum deprivation of AKR-2B cells.
AUTHOR: Schafer R; Karbach D; Hoppe J
CORPORATE SOURCE: Theodor-Boveri-Institut, Department of Physiological Chemistry II, Wurzburg, Germany.
SOURCE: EXPERIMENTAL CELL RESEARCH, (1998 Apr 10) 240 (1) 28-39.
Journal code: 0373226. ISSN: 0014-4827.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199805
ENTRY DATE: Entered STN: 19980520
Last Updated on STN: 20000303
Entered Medline: 19980514
AB As previously described, confluent AKR-2B fibroblasts rapidly disintegrate upon removal of serum. Platelet-derived growth factor isoforms AB or BB (PDGF-AB, -BB) added immediately after serum deprivation caused complete survival of the cells without initiating proliferation (Simm et al., 1994, J. Cell. Physiol. 160, 295). Here the role of cAMP as a protective agent was investigated by using forskolin or 8-Br-cAMP. Both reagents afforded high cellular protection. The phorbolester TPA, an activator of protein kinase C isoforms, also exerted a high protection against cell death (ED50 = 7 nM). Unexpectedly colchicine (ED50 = 1.5 microM) an inhibitor of tubulin polymerization also protected cells from death. The protective effects of PDGF-BB and TPA were dependent on protein synthesis as indicated by their complete suppression by cycloheximide (CHx). Surprisingly, forskolin and 8-Br-cAMP remained effective even in the presence of CHx. Detailed studies of several signalling pathways were performed. These investigations showed no interference between PDGF-BB and cAMP-dependent pathways at the early stage of signal **transduction** . As previously described, the ICE-like **protease inhibitor** tyr-val-ala-asp-chloromethylketone (YVAD-cmk) protected cells from death (Simm et al., 1997, J. Cell Sci. 110, 819-828). As shown here, a substantial protection was also achieved by the addition of two other caspase inhibitors: asp-glu-val-asp-aldehyde (DEVD-cho; ED50 = 100 microM) and benzoylcarbonyl-asp-glu-val-asp-chloromethylketone (Z-DEVD-cmk; ED50 = 100 microM). The activity of caspases was studied using either tyr-val-ala-asp-aminomethylcoumarine (YVAD-amc) or asp-glu-val-asp-aminomethylcoumarine (DEVD-amc) as substrates. There was no activation of a YVADase, whereas as pronounced increase in DEVDase activity was found with a maximum 3 h after serum removal. Cross competition experiments in vitro showed that the latter activity is inhibited also by low concentrations of YVAD-cmk (300-600 nM), suggesting that both inhibitors inactivated the same target protease. Remarkably all tested protective reagents lead to an inhibition of the DEVDase activity in intact cells. Since these reagents act via distinct intracellular pathways, the existence of a regulatory element upstream of the DEVDase is proposed which integrates signals from a variety of pathways.

=> l7(p)l15
L7(P)L15 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s l7(p)l15
L20 435 L7(P) L15

=> s l20 and l17
L21 10 L20 AND L17

=> dup rem l21
PROCESSING COMPLETED FOR L21
L22 9 DUP REM L21 (1 DUPLICATE REMOVED)

=> s l22 not l19
L23 2 L22 NOT L19

=> d ti so l23

L23 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS
TI **Adenoviral** vectors having nucleic acids encoding immunomodulatory molecules
SO PCT Int. Appl., 49 pp.
CODEN: PIXXD2

=> d ti so 1-2

L23 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS

TI **Adenoviral** vectors having nucleic acids encoding immunomodulatory molecules
SO PCT Int. Appl., 49 pp.
CODEN: PIXXD2

L23 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2002 ACS
TI Fusion proteins of receptor ligand-binding domains and proteinase inhibitors for inhibition of cell migration
SO PCT Int. Appl., 30 pp.
CODEN: PIXXD2

=> d ibib ab 1

L23 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:756888 CAPLUS
DOCUMENT NUMBER: 133:292012
TITLE: **Adenoviral** vectors having nucleic acids encoding immunomodulatory molecules
INVENTOR(S): Scaria, Abraham; Wadsworth, Samuel C.
PATENT ASSIGNEE(S): Genzyme Corp., USA
SOURCE: PCT Int. Appl., 49 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000063406	A2	20001026	WO 2000-US10530	20000419
WO 2000063406	A3	20010208		

W: AU, CA, JP
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
EP 1210447 A2 20020605 EP 2000-922301 20000419
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY
PRIORITY APPLN. INFO.: US 1999-130415P P 19990421
WO 2000-US10530 W 20000419

AB The invention relates to recombinant **adenoviral** vectors for use in delivering a nucleic acid(s) encoding an immunomodulatory mol.(s) to the cells of an individual that allows the vector to reduce or evade the host immune response from the cells of said individual. These vectors could be used to induce tolerance to an **adenovirus** antigen or transgenic products by **transduction** of antigen-presenting cells of an individual and/or increase the half-life of antigen-presenting cells in order to enhance immune response against tumor antigens. The invention further relates to recombinant **adenoviral** vectors for use in delivering desired therapeutic transgenes to cells in patients, said vectors contg. at least one nucleic acid encoding an immunomodulatory mol. that allow the vectors contg. said nucleic acid(s) to reduce or evade the host antiviral immune response to the **adenovirus** and one or more transgenes. The **adenovirus** vectors expressing baculovirus protein p35, or lymphocyte **proteinase inhibitor** baculovirus P-I-9, and a FasL/p35 vector are constructed to prolong the half-life of dendritic cells by protecting them from the gp100-specific cytotoxic T lymphocyte attack for cancer vaccine purpose. These vectors are capable of increased persistence in the individual to whom they are administered, thereby facilitating longer term administration of transgenes and reduced immunol. response upon administration. The invention also relates to methods for the use of such vectors in delivering transgenes to patients for therapeutic uses.

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(FILE 'HOME' ENTERED AT 15:16:46 ON 16 JUN 2002)

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 15:17:03 ON 16 JUN 2002
E RAAV
L1 1040 S RAAV
L2 622 S RECOMBINANT AAV
L3 0 S ADENO!ASSOCIATED VIRUS
L4 5747 S ADENO-ASSOCIATED
E ADENO-ASSOCIATED
L5 56882 S PROTEASE INHIBITOR
E PROTEINASE INH
L6 30433 S PROTEINASE INHIBITOR
L7 81516 S L5 OR L6
L8 1 S L1(S)L6
L9 0 S L2(S)L6
L10 1 S L4(S)L6
L11 1 S L1 AND L6
L12 0 S L2 AND L6
L13 9 S L4 AND L6
L14 9 DUP REM L13 (0 DUPLICATES REMOVED)
L15 281838 S TRANSDUCTION
L16 324 S L7(S)L15
L17 677499 S ADENO?
L18 7 S L16 AND L17
L19 7 DUP REM L18 (0 DUPLICATES REMOVED)
L20 435 S L7(P)L15
L21 10 S L20 AND L17
L22 9 DUP REM L21 (1 DUPLICATE REMOVED)
L23 2 S L22 NOT L19

=> (improv? or enhanc? or increas? or decreas? or augment? or potentiat? or inhibit?)(s)(transduct? or infect? or gene transfer)
(IMPROV? IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter "HELP COMMANDS" at an arrow prompt (=>).

=> s (improv? or enhanc? or increas? or decreas? or augment? or potentiat? or inhibit?)(s)(transduct? or infect? or gene transfer)
2 FILES SEARCHED...
L24 454934 (IMPROV? OR ENHANC? OR INCREAS? OR DECREAS? OR AUGMENT? OR POTENTIAT? OR INHIBIT?)(S)(TRANSDUCT? OR INFECT? OR GENE TRANSFER)

=> s l24(p)(l1 or l2 or l4)
L25 1086 L24(P)(L1 OR L2 OR L4)

=> s l7 and l25
L26 3 L7 AND L25

=> dup rem l26
PROCESSING COMPLETED FOR L26
L27 3 DUP REM L26 (0 DUPLICATES REMOVED)

=> d ti so 1-3

L27 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2002 ACS
TI Compounds and methods to **enhance** recombinant **adeno-associated** virus (**rAAV**) **transduction** for gene therapy
SO PCT Int. Appl., 127 pp.
CODEN: PIXXD2

L27 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS
TI Controlling immune response to specific antigens
SO PCT Int. Appl., 93 pp.
CODEN: PIXXD2

L27 ANSWER 3 OF 3 MEDLINE
TI Ribozyme gene therapy for hepatitis C virus infection.
SO CLINICAL AND DIAGNOSTIC VIROLOGY, (1998 Jul 15) 10 (2-3) 163-71.
Journal code: 9309653. ISSN: 0928-0197.

=> d his

(FILE 'HOME' ENTERED AT 15:16:46 ON 16 JUN 2002)

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 15:17:03 ON 16 JUN 2002
E RAAV
L1 1040 S RAAV
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L14 9 DUP REM L13 (0 DUPLICATES REMOVED)
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L17 677499 S ADENO?
L18 7 S L16 AND L17
L19 7 DUP REM L18 (0 DUPLICATES REMOVED)
L20 435 S L7(P)L15
L21 10 S L20 AND L17
L22 9 DUP REM L21 (1 DUPLICATE REMOVED)
L23 2 S L22 NOT L19
L24 454934 S (IMPROV? OR ENHANC? OR INCREAS? OR DECREAS? OR AUGMENT? OR PO
L25 1086 S L24(P)(L1 OR L2 OR L4)
L26 3 S L7 AND L25
L27 3 DUP REM L26 (0 DUPLICATES REMOVED)

=> s l24(s)(l1 or l2)
L28 410 L24(S)(L1 OR L2)

=> s recombinant adeno-associated
L29 1279 RECOMBINANT ADENO-ASSOCIATED

=> s l1 or l2 or l29
L30 1809 L1 OR L2 OR L29

=> s l24(s)l30
L31 464 L24(S) L30

=> dup rem l31
PROCESSING COMPLETED FOR L31
L32 244 DUP REM L31 (220 DUPLICATES REMOVED)

=> d ti so 1-100

L32 ANSWER 1 OF 244 MEDLINE
TI Cardiomyocyte-specific gene expression following recombinant adeno-associated viral vector transduction.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (2002 May 24) 277 (21) 18979-85.
Journal code: 2985121R. ISSN: 0021-9258.

L32 ANSWER 2 OF 244 MEDLINE DUPLICATE 1
TI Efficient integration of recombinant adeno-associated virus DNA vectors
requires a p5-rep sequence in cis.
SO JOURNAL OF VIROLOGY, (2002 Jun) 76 (11) 5411-21.
Journal code: 0113724. ISSN: 0022-538X.

L32 ANSWER 3 OF 244 MEDLINE DUPLICATE 2
TI Reversal of motor impairments in parkinsonian rats by continuous intrastriatal delivery of L-dopa using rAAV-mediated gene transfer.
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (2002 Apr 2) 99 (7) 4708-13.
Journal code: 7505876. ISSN: 0027-8424.

L32 ANSWER 4 OF 244 MEDLINE DUPLICATE 3
TI Ubiquitination of both adeno-associated virus type 2 and 5 capsid proteins
affects the transduction efficiency of recombinant vectors.
SO JOURNAL OF VIROLOGY, (2002 Mar) 76 (5) 2043-53.
Journal code: 0113724. ISSN: 0022-538X.

L32 ANSWER 5 OF 244 MEDLINE DUPLICATE 4
TI Rescue of hereditary form of dilated cardiomyopathy by rAAV-mediated
somatic gene therapy: amelioration of morphological findings, sarcolemmal
permeability, cardiac performances, and the prognosis of TO-2 hamsters.
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (2002 Jan 22) 99 (2) 901-6.
Journal code: 7505876. ISSN: 0027-8424.

L32 ANSWER 6 OF 244 MEDLINE DUPLICATE 5
TI Inducible adeno-associated virus vector-delivered transgene expression in
corneal endothelium.
SO INVESTIGATIVE OPHTHALMOLOGY AND VISUAL SCIENCE, (2002 Mar) 43 (3) 751-7.
Journal code: 7703701. ISSN: 0146-0404.

L32 ANSWER 7 OF 244 MEDLINE DUPLICATE 6
TI Gene therapy strategy for long-term myocardial protection using adeno-associated virus-mediated delivery of heme oxygenase gene.
SO CIRCULATION, (2002 Feb 5) 105 (5) 602-7.
Journal code: 0147763. ISSN: 1524-4539.

L32 ANSWER 8 OF 244 MEDLINE DUPLICATE 7
TI Adeno-associated virus-mediated transfer of human acid maltase gene
results in a transient reduction of glycogen accumulation in muscle of Japanese quail with acid maltase deficiency.
SO GENE THERAPY, (2002 May) 9 (9) 554-63.
Journal code: 9421525. ISSN: 0969-7128.

L32 ANSWER 9 OF 244 MEDLINE DUPLICATE 8
TI Kinetics of transgene expression in mouse retina following sub-retinal
injection of recombinant adeno-associated virus.
SO VISION RESEARCH, (2002 Feb) 42 (4) 541-9.
Journal code: 0417402. ISSN: 0042-6989.

L32 ANSWER 10 OF 244 MEDLINE
TI Recombinant Adeno-associated Virus Serotypes 2- and 5-Mediated Gene
Transfer in the Mammalian Brain: Quantitative Analysis of Heparin Co-infusion.
SO MOLECULAR THERAPY, (2002 Apr) 5 (4) 371-80.
Journal code: 100890581. ISSN: 1525-0016.

L32 ANSWER 11 OF 244 MEDLINE DUPLICATE 9
TI Transduction of human neural progenitor cells using recombinant adeno-associated viral vectors.
SO GENE THERAPY, (2002 Feb) 9 (4) 245-55.
Journal code: 9421525. ISSN: 0969-7128.

L32 ANSWER 12 OF 244 MEDLINE DUPLICATE 10
TI Neuropathological and behavioral consequences of adeno-associated viral
vector-mediated continuous intrastriatal neurotrophin delivery in a focal
ischemia model in rats.
SO NEUROBIOLOGY OF DISEASE, (2002 Mar) 9 (2) 187-204.
Journal code: 9500169. ISSN: 0969-9961.

L32 ANSWER 13 OF 244 MEDLINE DUPLICATE 11
TI Transduction of human and mouse pancreatic islet cells using a bicistronic
recombinant adeno-associated viral vector.
SO MOLECULAR THERAPY, (2002 Feb) 5 (2) 154-60.
Journal code: 100890581. ISSN: 1525-0016.

L32 ANSWER 14 OF 244 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Inactivation of VEGF in skeletal muscle results in decreased capillary
number and apoptosis.
SO FASEB Journal, (March 20, 2002) Vol. 16, No. 4, pp. A91.
http://www.fasebj.org/. print.
Meeting Info.: Annual Meeting of the Professional Research Scientists on
Experimental Biology New Orleans, Louisiana, USA April 20-24, 2002
ISSN: 0892-6638.

L32 ANSWER 15 OF 244 MEDLINE
TI FGF-4 gene therapy GENERX--Collateral Therapeutics.
SO BioDrugs, (2002) 16 (1) 75-6.
Journal code: 9705305. ISSN: 1173-8804.

L32 ANSWER 16 OF 244 MEDLINE DUPLICATE 12
TI Somatic gene therapy of dilated cardiomyopathy.
SO NIPPON YAKURIGAKU ZASSHI. FOLIA PHARMACOLOGICA JAPONICA, (2002 Jan) 119
(1) 37-44.
Journal code: 0420550. ISSN: 0015-5691.

L32 ANSWER 17 OF 244 MEDLINE DUPLICATE 13
TI Efficient generation of cytotoxic T lymphocytes against cervical cancer
cells by adeno-associated virus/human papillomavirus type 16 E7 antigen
gene transduction into dendritic cells.
SO EUROPEAN JOURNAL OF IMMUNOLOGY, (2002 Jan) 32 (1) 30-8.
Journal code: 1273201. ISSN: 0014-2980.

L32 ANSWER 18 OF 244 MEDLINE DUPLICATE 14
TI Inhibition of atherosclerosis in apolipoprotein-E-deficient mice following
muscle transduction with adeno-associated virus vectors encoding human
apolipoprotein-E.
SO GENE THERAPY, (2002 Jan) 9 (1) 21-9.
Journal code: 9421525. ISSN: 0969-7128.

L32 ANSWER 19 OF 244 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Recombinant adenovirus and adeno-associated virus, cell lines and methods
of production and use thereof.
SO Official Gazette of the United States Patent and Trademark Office Patents,
(Aug. 7, 2001) Vol. 1249, No. 1, pp. No Pagination. e-file.
ISSN: 0098-1133.

L32 ANSWER 20 OF 244 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Recombinant adenovirus and adeno-associated virus, cell lines, and methods
of production and use thereof.
SO Official Gazette of the United States Patent and Trademark Office Patents,
(July 17, 2001) Vol. 1248, No. 3, pp. No Pagination. e-file.
ISSN: 0098-1133.

L32 ANSWER 21 OF 244 MEDLINE DUPLICATE 15
TI Binding of adeno-associated virus type 5 to 2,3-linked sialic acid is required for gene transfer.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (2001 Jun 8) 276 (23) 20610-6.
Journal code: 2985121R. ISSN: 0021-9258.

L32 ANSWER 22 OF 244 MEDLINE DUPLICATE 16
TI Involvement of cellular double-stranded DNA break binding proteins in
processing of the recombinant adeno-associated virus genome.
SO JOURNAL OF VIROLOGY, (2001 Dec) 75 (24) 12279-87.
Journal code: 0113724. ISSN: 0022-538X.

L32 ANSWER 23 OF 244 MEDLINE DUPLICATE 17
TI Adeno-associated virus type 2-mediated transduction of human monocyte-derived dendritic cells: implications for ex vivo immunotherapy.
SO JOURNAL OF VIROLOGY, (2001 Oct) 75 (19) 9493-501.
Journal code: 0113724. ISSN: 0022-538X.

L32 ANSWER 24 OF 244 MEDLINE DUPLICATE 18
TI Enhancement of muscle gene delivery with pseudotyped adeno-associated
virus type 5 correlates with myoblast differentiation.
SO JOURNAL OF VIROLOGY, (2001 Aug) 75 (16) 7662-71.
Journal code: 0113724. ISSN: 0022-538X.

L32 ANSWER 25 OF 244 MEDLINE DUPLICATE 19
TI Induction of tolerance to human factor VIII in mice.
SO BLOOD, (2001 May 15) 97 (10) 3311-2.
Journal code: 7603509. ISSN: 0006-4971.

L32 ANSWER 26 OF 244 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Differential neuronal gene expression from two non-specific promoters
after recombinant adeno-associated virus (rAAV) 2 transduction in vivo.
SO Society for Neuroscience Abstracts, (2001) Vol. 27, No. 2, pp. 2345.
print.
Meeting Info.: 31st Annual Meeting of the Society for Neuroscience San
Diego, California, USA November 10-15, 2001
ISSN: 0190-5295.

L32 ANSWER 27 OF 244 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Efficient and sustained transduction of human and rat fetal ventral mesencephalon mediated by adeno-associated virus vectors.
SO Society for Neuroscience Abstracts, (2001) Vol. 27, No. 2, pp. 2294.
print.
Meeting Info.: 31st Annual Meeting of the Society for Neuroscience San
Diego, California, USA November 10-15, 2001
ISSN: 0190-5295.

L32 ANSWER 28 OF 244 MEDLINE DUPLICATE 20
TI A novel method using baculovirus-mediated gene transfer for production of
recombinant adeno-associated virus vectors.
SO JOURNAL OF GENERAL VIROLOGY, (2001 Sep) 82 (Pt 9) 2051-60.
Journal code: 0077340. ISSN: 0022-1317.

L32 ANSWER 29 OF 244 BIOSIS COPYRIGHT 2002

BIOLOGICAL ABSTRACTS INC.
TI Effects of rAAV-mediated NPY and galanin overexpression in rat hippocampus
on rat behaviour and seizure modulation.
SO Society for Neuroscience Abstracts, (2001) Vol. 27, No. 2, pp. 2014.
print.
Meeting Info.: 31st Annual Meeting of the Society for Neuroscience San
Diego, California, USA November 10-15, 2001
ISSN: 0190-5295.

L32 ANSWER 30 OF 244 BIOSIS COPYRIGHT 2002
BIOLOGICAL ABSTRACTS INC.
TI Effects of constitutive Homer 1a expression in the rat kainate seizure
model.
SO Society for Neuroscience Abstracts, (2001) Vol. 27, No. 2, pp. 2014.
print.
Meeting Info.: 31st Annual Meeting of the Society for Neuroscience San
Diego, California, USA November 10-15, 2001
ISSN: 0190-5295.

L32 ANSWER 31 OF 244 MEDLINE DUPLICATE 21
TI Intracellular trafficking of adeno-associated virus vectors: routing to the late endosomal compartment and proteasome degradation.
SO JOURNAL OF VIROLOGY, (2001 Feb) 75 (4) 1824-33.
Journal code: 0113724. ISSN: 0022-538X.

L32 ANSWER 32 OF 244 MEDLINE DUPLICATE 22
TI Insertional mutagenesis of the adeno-associated virus type 2 (AAV2) capsid
gene and generation of AAV2 vectors targeted to alternative cell-surface
receptors.
SO HUMAN GENE THERAPY, (2001 Sep 20) 12 (14) 1697-711.
Journal code: 9008950. ISSN: 1043-0342.

L32 ANSWER 33 OF 244 MEDLINE DUPLICATE 23
TI Recombinant adeno-associated virus vector-transduced vascular endothelial
cells express the thrombomodulin transgene under the regulation of enhanced plasminogen activator inhibitor-1 promoter.
SO GENE THERAPY, (2001 Nov) 8 (22) 1690-7.
Journal code: 9421525. ISSN: 0969-7128.

L32 ANSWER 34 OF 244 MEDLINE DUPLICATE 24
TI Transduction of ovarian cancer cells: a recombinant adeno-associated viral
vector compared to an adenoviral vector.
SO BRITISH JOURNAL OF CANCER, (2001 Nov 16) 85 (10) 1592-9.
Journal code: 0370635. ISSN: 0007-0920.

L32 ANSWER 35 OF 244 MEDLINE
TI Subthalamic GAD gene transfer in Parkinson disease patients who are
candidates for deep brain stimulation.
SO HUMAN GENE THERAPY, (2001 Aug 10) 12 (12) 1589-91.
Journal code: 9008950. ISSN: 1043-0342.

L32 ANSWER 36 OF 244 BIOSIS COPYRIGHT 2002
BIOLOGICAL ABSTRACTS INC.
TI rAAV-delivered ribozyme mediated reduction of huntingtin mRNA in adult
striatum.
SO Society for Neuroscience Abstracts, (2001) Vol. 27, No. 1, pp. 1508.
print.
Meeting Info.: 31st Annual Meeting of the Society for Neuroscience San
Diego, California, USA November 10-15, 2001
ISSN: 0190-5295.

L32 ANSWER 37 OF 244 BIOSIS COPYRIGHT 2002
BIOLOGICAL ABSTRACTS INC.
TI rAAV mediated **gene transfer** of GAD65 into
the rat hippocampus **decreases** KA-induced seizure activity.
SO Society for Neuroscience Abstracts, (2001) Vol. 27, No. 1, pp. 1461.
print.
Meeting Info.: 31st Annual Meeting of the Society for Neuroscience San
Diego, California, USA November 10-15, 2001
ISSN: 0190-5295.

L32 ANSWER 38 OF 244 MEDLINE DUPLICATE 25
TI Prevention of systemic clinical disease in MPS VII mice following AAV-mediated neonatal gene transfer.
SO GENE THERAPY, (2001 Sep) 8 (17) 1291-8.
Journal code: 9421525. ISSN: 0969-7128.

L32 ANSWER 39 OF 244 CAPLUS COPYRIGHT 2002 ACS
TI Factors influencing in vivo transduction by recombinant adeno-associated
viral vectors expressing the human factor IX cDNA
SO Blood (2001), 97(5), 1258-1265
CODEN: BLOOAW; ISSN: 0006-4971

L32 ANSWER 40 OF 244 MEDLINE DUPLICATE 26
TI Self-complementary recombinant adeno-associated virus (scAAV) vectors
promote efficient transduction independently of DNA synthesis.
SO GENE THERAPY, (2001 Aug) 8 (16) 1248-54.
Journal code: 9421525. ISSN: 0969-7128.

L32 ANSWER 41 OF 244 MEDLINE DUPLICATE 27
TI Standard heparin, low molecular weight heparin, low molecular weight
heparinoid, and recombinant hirudin differ in their ability to **inhibit transduction** by **recombinant adeno-associated** virus type 2 vectors.
SO GENE THERAPY, (2001 Jun) 8 (12) 966-8.
Journal code: 9421525. ISSN: 0969-7128.

L32 ANSWER 42 OF 244 MEDLINE
TI Rapid induction of cytotoxic T-cell response against cervical cancer cells
by human papillomavirus type 16 E6 antigen gene delivery into human
dendritic cells by an adeno-associated virus vector.
SO CANCER GENE THERAPY, (2001 Dec) 8 (12) 948-57.
Journal code: 9432230. ISSN: 0929-1903.

L32 ANSWER 43 OF 244 MEDLINE DUPLICATE 28
TI Protamine sulfate **enhances** the **transduction** efficiency of **recombinant adeno-associated** virus-mediated gene delivery.
SO PHARMACEUTICAL RESEARCH, (2001 Jul) 18 (7) 922-7.
Journal code: 8406521. ISSN: 0724-8741.

L32 ANSWER 44 OF 244 BIOSIS COPYRIGHT 2002
BIOLOGICAL ABSTRACTS INC.
TI Sustained high level expression of human FIX following liver targeted
delivery of recombinant adeno-associated virus encoding the human FIX gene
in rhesus macaques.
SO Blood, (November 16, 2001) Vol. 98, No. 11 Part 1, pp. 782a.
http://www.bloodjournal.org/. print.
Meeting Info.: 43rd Annual Meeting of the American Society of Hematology,
Part 1 Orlando, Florida, USA December 07-11, 2001
ISSN: 0006-4971.

L32 ANSWER 45 OF 244 BIOSIS COPYRIGHT 2002

BIOLOGICAL ABSTRACTS INC.
TI Alternate AAV serotypes result in enhanced factor IX expression in murine
and canine models of hemophilia B.
SO Blood, (November 16, 2001) Vol. 98, No. 11 Part 1, pp. 745a.
http://www.bloodjournal.org/. print.
Meeting Info.: 43rd Annual Meeting of the American Society of Hematology,
Part 1 Orlando, Florida, USA December 07-11, 2001
ISSN: 0006-4971.

L32 ANSWER 46 OF 244 BIOSIS COPYRIGHT 2002
BIOLOGICAL ABSTRACTS INC.
TI Long-term expression of activated FVII in vivo following AAV-mediated
liver gene transfer: Implications for treatment with continuous infusion
of recombinant activated FVII.
SO Blood, (November 16, 2001) Vol. 98, No. 11 Part 1, pp. 696a.
http://www.bloodjournal.org/. print.
Meeting Info.: 43rd Annual Meeting of the American Society of Hematology,
Part 1 Orlando, Florida, USA December 07-11, 2001
ISSN: 0006-4971.

L32 ANSWER 47 OF 244 BIOSIS COPYRIGHT 2002
BIOLOGICAL ABSTRACTS INC.
TI Tightly regulated rAAV-mediated gene expression driven by a bidirectional
tetracycline-dependent promoter.
SO Society for Neuroscience Abstracts, (2001) Vol. 27, No. 1, pp. 668. print.
Meeting Info.: 31st Annual Meeting of the Society for Neuroscience San
Diego, California, USA November 10-15, 2001
ISSN: 0190-5295.

L32 ANSWER 48 OF 244 MEDLINE DUPLICATE 29
TI Glial cell line derived neurotrophic factor delays photoreceptor degeneration in a transgenic rat model of retinitis pigmentosa.
SO MOLECULAR THERAPY, (2001 Dec) 4 (6) 622-9.
Journal code: 100890581. ISSN: 1525-0016.

L32 ANSWER 49 OF 244 BIOSIS COPYRIGHT 2002
BIOLOGICAL ABSTRACTS INC.
TI Long-term expression of the exogenous gene in EB virus transformed B
lymphocytes transduced by recombinant adeno-associated virus.
SO Zhonghua Weishengwuxue He Mianyixue Zazhi, (November, 2001) Vol. 21, No.
6, pp. 594-599. print.
ISSN: 0254-5101.

L32 ANSWER 50 OF 244 MEDLINE
TI Lack of germline transmission of vector sequences following systemic
administration of recombinant AAV-2 vector in males.
SO MOLECULAR THERAPY, (2001 Dec) 4 (6) 586-92.
Journal code: 100890581. ISSN: 1525-0016.

L32 ANSWER 51 OF 244 BIOSIS COPYRIGHT 2002
BIOLOGICAL ABSTRACTS INC.
DUPLICATE 30
TI Gene therapy for hemophilia B mediated by recombinant adeno-associated
viral vector with hFIXR338A, a high catalytic activity mutation of human
coagulation factor IX.
SO Science in China Series C Life Sciences, (December, 2001) Vol. 44, No. 6,
pp. 585-592. print.
ISSN: 1006-9305.

L32 ANSWER 52 OF 244 MEDLINE DUPLICATE 31
TI Gene therapy for hypertension: the preclinical data.
SO HYPERTENSION, (2001 Sep) 38 (3 Pt 2) 543-8. Ref: 46
Journal code: 7906255. ISSN: 1524-4563.

L32 ANSWER 53 OF 244 BIOSIS COPYRIGHT 2002
BIOLOGICAL ABSTRACTS INC.
TI Characterization and time course of a novel adeno-associated virus (AAV)
transduction system in brain.
SO Society for Neuroscience Abstracts, (2001) Vol. 27, No. 1, pp. 534. print.
Meeting Info.: 31st Annual Meeting of the Society for Neuroscience San
Diego, California, USA November 10-15, 2001
ISSN: 0190-5295.

L32 ANSWER 54 OF 244 BIOSIS COPYRIGHT 2002
BIOLOGICAL ABSTRACTS INC.
TI GAD65 transduction of the subthalamic nucleus changes the action of
excitatory projections to the substantia nigra.
SO Society for Neuroscience Abstracts, (2001) Vol. 27, No. 1, pp. 521. print.
Meeting Info.: 31st Annual Meeting of the Society for Neuroscience San
Diego, California, USA November 10-15, 2001
ISSN: 0190-5295.

L32 ANSWER 55 OF 244 MEDLINE DUPLICATE 32
TI Efficient ex vivo transduction of pancreatic islet cells with recombinant
adeno-associated virus vectors.
SO DIABETES, (2001 Mar) 50 (3) 515-20.
Journal code: 0372763. ISSN: 0012-1797.

L32 ANSWER 56 OF 244 BIOSIS COPYRIGHT 2002
BIOLOGICAL ABSTRACTS INC.
TI BJAB cells undergo an oncosis-like cell death after transduction with an
antisense DNA to human 6A8 alpha-mannosidase gene.
SO Zhonghua Weishengwuxue He Mianyixue Zazhi, (September, 2001) Vol. 21, No.
5, pp. 480-485. print.
ISSN: 0254-5101.

L32 ANSWER 57 OF 244 MEDLINE DUPLICATE 33
TI Tissue-specific gene expression in medullary thyroid carcinoma cells
employing calcitonin regulatory elements and AAV vectors.
SO CANCER GENE THERAPY, (2001 Jul) 8 (7) 469-72.
Journal code: 9432230. ISSN: 0929-1903.

L32 ANSWER 58 OF 244 MEDLINE
TI Protection from experimental endotoxemia by a recombinant adeno-associated
virus encoding interleukin 10.
SO JOURNAL OF GENE MEDICINE, (2001 Sep-Oct) 3 (5) 450-7.
Journal code: 9815764. ISSN: 1099-498X.

L32 ANSWER 59 OF 244 MEDLINE DUPLICATE 34
TI Adeno-associated virus-mediated delivery of glial cell line-derived neurotrophic factor protects motor neuron-like cells from apoptosis.
SO JOURNAL OF NEUROVIROLOGY, (2001 Oct) 7 (5) 437-46.
Journal code: 9508123. ISSN: 1355-0284.

L32 ANSWER 60 OF 244 BIOSIS COPYRIGHT 2002
BIOLOGICAL ABSTRACTS INC.
TI Recombinant adeno-associated viral vector mediated transduction of murine
liver but not skeletal muscle is heavily influenced by gender.
SO Blood, (November 16, 2001) Vol. 98, No. 11 Part 1, pp. 425a.
http://www.bloodjournal.org/. print.
Meeting Info.: 43rd Annual Meeting of the American Society of Hematology,

Part 1 Orlando, Florida, USA December 07-11, 2001
ISSN: 0006-4971.

L32 ANSWER 61 OF 244 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI New strategies for the therapy of sarcomas and other solid tumors using
recombinant adeno-associated virus 2 vectors that contain a suicide gene.
SO Blood, (November 16, 2001) Vol. 98, No. 11 Part 2, pp. 408b. http://www.bloodjournal.org/. print.
Meeting Info.: 43rd Annual Meeting of the American Society of Hematology,
Part 2 Orlando, Florida, USA December 07-11, 2001
ISSN: 0006-4971.

L32 ANSWER 62 OF 244 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Studies on transferring variant DHFR-GFP gene into human hematopoietic
cells by adeno-associated virus.
SO Blood, (November 16, 2001) Vol. 98, No. 11 Part 2, pp. 404b. http://www.bloodjournal.org/. print.
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retinal pigment epithelial cells.
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Journal code: 9432230. ISSN: 0929-1903.

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vivo with recombinant adeno-associated virus.
SO HUMAN GENE THERAPY, (2001 Jan 1) 12 (1) 45-50.
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Journal code: 0113724. ISSN: 0022-538X.

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Journal code: 0113724. ISSN: 0022-538X.

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mouse hepatocytes in vivo: cell cycling does not influence hepatocyte transduction.
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Journal code: 0113724. ISSN: 0022-538X.

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Journal code: 9008950. ISSN: 1043-0342.

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mucopolysaccharidosis type VII mouse.
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switching system.
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Journal code: 0372516. ISSN: 0006-291X.

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recombinant adeno-associated virus.
SO HUMAN GENE THERAPY, (2000 Feb 10) 11 (3) 449-57.
Journal code: 9008950. ISSN: 1043-0342.

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Meeting Info.: 42nd Annual Meeting of the American Society of Hematology
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L32 ANSWER 112 OF 244 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
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SO MOLECULAR THERAPY, (2000 Oct) 2 (4) 394-403.
Journal code: 100890581. ISSN: 1525-0016.

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SO CORNEA, (2000 May) 19 (3) 369-73.
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Journal code: 9432230. ISSN: 0929-1903.

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Journal code: 9815764. ISSN: 1099-498X.

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SO GENE THERAPY, (2000 Feb) 7 (3) 183-95.
Journal code: 9421525. ISSN: 0969-7128.

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in vivo.
SO PHYSIOLOGICAL GENOMICS, (2000 Apr 27) 2 (3) 117-27.
Journal code: 100894125. ISSN: 1094-8341.

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integration through pathways similar to UV irradiation.
SO VIROLOGY, (2000 Mar 1) 268 (1) 68-78.
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SO GENE THERAPY, (2000 Jan) 7 (1) 24-30. Ref: 48
Journal code: 9421525. ISSN: 0969-7128.

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using affinity column chromatography, protease digestion and solvent extraction.
SO JOURNAL OF VIROLOGICAL METHODS, (2000 Mar) 85 (1-2) 23-34.
Journal code: 8005839. ISSN: 0166-0934.

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SO Respir Res, (2000) 1 (1) 16-8. Ref: 17
Journal code: 101090633. ISSN: 1465-9921.

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SO Bingdu Xuebao (2000), 16(1), 1-6
CODEN: BIXUEA; ISSN: 1000-8721

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No.-700.5. print.
Meeting Info.: 30th Annual Meeting of the Society of Neuroscience New
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SO JOURNAL OF VIROLOGY, (1999 Dec) 73 (12) 10371-6.
Journal code: 0113724. ISSN: 0022-538X.

L32 ANSWER 132 OF 244 MEDLINE DUPLICATE 79
TI Overexpression of cyclin A **inhibits augmentation** of **recombinant adeno-associated** virus **transduction** by the adenovirus E4orf6 protein.
SO JOURNAL OF VIROLOGY, (1999 Dec) 73 (12) 10010-9.
Journal code: 0113724. ISSN: 0022-538X.

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through intermolecular recombination.
SO JOURNAL OF VIROLOGY, (1999 Nov) 73 (11) 9468-77.
Journal code: 0113724. ISSN: 0022-538X.

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viral genes.
SO JOURNAL OF VIROLOGY, (1999 Nov) 73 (11) 9314-24.
Journal code: 0113724. ISSN: 0022-538X.

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amplicons and herpes vectors deleted for glycoprotein H.
SO HUMAN GENE THERAPY, (1999 Oct 10) 10 (15) 2527-37.
Journal code: 9008950. ISSN: 1043-0342.

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SO HUMAN GENE THERAPY, (1999 Oct 10) 10 (15) 2481-94.
Journal code: 9008950. ISSN: 1043-0342.

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the woodchuck hepatitis virus posttranscriptional regulatory element: implications for gene therapy.
SO HUMAN GENE THERAPY, (1999 Sep 20) 10 (14) 2295-305.
Journal code: 9008950. ISSN: 1043-0342.

L32 ANSWER 138 OF 244 MEDLINE DUPLICATE 85
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the skeletal muscle.
SO JOURNAL OF VIROLOGY, (1999 Mar) 73 (3) 1949-55.
Journal code: 0113724. ISSN: 0022-538X.

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Journal code: 9013836. ISSN: 1046-6673.

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Journal code: 9008950. ISSN: 1043-0342.

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Journal code: 7706534. ISSN: 0003-9950.

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SO GENE THERAPY, (1999 Aug) 6 (8) 1427-37.
Journal code: 9421525. ISSN: 0969-7128.

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genomes can limit production of recombinant AAV-2.
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Journal code: 9421525. ISSN: 0969-7128.

L32 ANSWER 144 OF 244 MEDLINE DUPLICATE 91
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SO JOURNAL OF VIROLOGY, (1999 Feb) 73 (2) 1309-19.
Journal code: 0113724. ISSN: 0022-538X.

L32 ANSWER 145 OF 244 MEDLINE DUPLICATE 92
TI Recombinant AAV-2 harboring gfp-antisense/ribozyme fusion sequences
monitor transduction, gene expression, and show anti-HIV-1 efficacy.
SO GENE THERAPY, (1999 Jul) 6 (7) 1231-8.
Journal code: 9421525. ISSN: 0969-7128.

L32 ANSWER 146 OF 244 MEDLINE DUPLICATE 93
TI Cellular contaminants of adeno-associated virus vector stocks can enhance
transduction.
SO GENE THERAPY, (1999 Jun) 6 (6) 1045-53.
Journal code: 9421525. ISSN: 0969-7128.

L32 ANSWER 147 OF 244 MEDLINE DUPLICATE 94
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Cap.
SO GENE THERAPY, (1999 Jun) 6 (6) 986-93.
Journal code: 9421525. ISSN: 0969-7128.

L32 ANSWER 148 OF 244 MEDLINE DUPLICATE 95
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purification using novel methods **improves infectious** titer and yield.
SO GENE THERAPY, (1999 Jun) 6 (6) 973-85.
Journal code: 9421525. ISSN: 0969-7128.

L32 ANSWER 149 OF 244 MEDLINE DUPLICATE 96
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SO CANCER RESEARCH, (1999 Feb 15) 59 (4) 940-6.
Journal code: 2984705R. ISSN: 0008-5472.

L32 ANSWER 150 OF 244 MEDLINE DUPLICATE 97
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neurotrophic factor on choline acetyltransferase and Trk receptor levels
in the adult rat basal forebrain.
SO NEUROSCIENCE, (1999 Mar) 90 (3) 815-21.
Journal code: 7605074. ISSN: 0306-4522.

L32 ANSWER 151 OF 244 MEDLINE DUPLICATE 98
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retina by clinical fluorescence photography.
SO HUMAN GENE THERAPY, (1999 Mar 1) 10 (4) 641-8.
Journal code: 9008950. ISSN: 1043-0342.

L32 ANSWER 152 OF 244 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
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rescues factor IX deficiency mouse by AAV-mediated gene transfer.
SO Science in China Series C Life Sciences, (Dec., 1999) Vol. 42, No. 6, pp.
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ISSN: 1006-9305.

L32 ANSWER 153 OF 244 MEDLINE DUPLICATE 99
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SO HUMAN GENE THERAPY, (1999 Mar 1) 10 (4) 591-602.
Journal code: 9008950. ISSN: 1043-0342.

L32 ANSWER 154 OF 244 MEDLINE
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SO J Hematother Stem Cell Res, (1999 Dec) 8 (6) 585-92.
Journal code: 100892915. ISSN: 1525-8165.

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virus vectors.
SO GENE, (1999 Oct 1) 238 (2) 397-405.
Journal code: 7706761. ISSN: 0378-1119.

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adeno-associated virus-based vector.
SO HYPERTENSION, (1999 Jan) 33 (1 Pt 2) 354-9.
Journal code: 7906255. ISSN: 0194-911X.

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analysis of vector DNA forms resulting in sustained expression.
SO JOURNAL OF DRUG TARGETING, (1999 Dec) 7 (4) 269-83.
Journal code: 9312476. ISSN: 1061-186X.

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SO INTERVIROLOGY, (1999) 42 (4) 213-20.
Journal code: 0364265. ISSN: 0300-5526.

L32 ANSWER 159 OF 244 MEDLINE DUPLICATE 103
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modulation of expression.
SO HUMAN GENE THERAPY, (1999 Jan 20) 10 (2) 201-13.
Journal code: 9008950. ISSN: 1043-0342.

L32 ANSWER 160 OF 244 MEDLINE DUPLICATE 104
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a rodent model of Parkinson's disease.
SO NEUROSCIENCE, (1999) 92 (1) 185-96.
Journal code: 7605074. ISSN: 0306-4522.

L32 ANSWER 161 OF 244 MEDLINE DUPLICATE 105
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SO GENE THERAPY, (1999 Feb) 6 (2) 182-9.
Journal code: 9421525. ISSN: 0969-7128.

L32 ANSWER 162 OF 244 MEDLINE DUPLICATE 106
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regulated by adenovirus E4 ORF6 and E2a gene expression.
SO JOURNAL OF VIROLOGY, (1999 Jan) 73 (1) 161-9.
Journal code: 0113724. ISSN: 0022-538X.

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SO JOURNAL OF NEUROSCIENCE RESEARCH, (1999 Jul 1) 57 (1) 137-48.
Journal code: 7600111. ISSN: 0360-4012.

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SO BRAIN RESEARCH, (1999 Jun 19) 832 (1-2) 136-44.
Journal code: 0045503. ISSN: 0006-8993.

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SO Cold Spring Harbor Monograph Series (1999), 36(Development of Human Gene
Therapy), 131-172
CODEN: CHMSDK; ISSN: 0270-1847

L32 ANSWER 166 OF 244 MEDLINE DUPLICATE 109
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SO CLINICAL IMMUNOLOGY, (1999 Jul) 92 (1) 67-75.
Journal code: 100883537. ISSN: 1521-6616.

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SO JOURNAL OF GENE MEDICINE, (1999 Jan-Feb) 1 (1) 31-42.
Journal code: 9815764. ISSN: 1099-498X.

L32 ANSWER 168 OF 244 CAPLUS COPYRIGHT 2002 ACS
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SO U.S., 12 pp., Cont.-in-part of U.S. 5,604,090.
CODEN: USXXAM

L32 ANSWER 169 OF 244 MEDLINE DUPLICATE 110
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Journal code: 7505876. ISSN: 0027-8424.

L32 ANSWER 170 OF 244 MEDLINE DUPLICATE 111
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cystic fibrosis airway epithelial cells: comparison with adenovirus vectors.
SO JOURNAL OF VIROLOGY, (1998 Nov) 72 (11) 8904-12.
Journal code: 0113724. ISSN: 0022-538X.

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SO CANCER RESEARCH, (1998 Dec 15) 58 (24) 5673-7.
Journal code: 2984705R. ISSN: 0008-5472.

L32 ANSWER 172 OF 244 MEDLINE DUPLICATE 113
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and expression of transduced genes.
SO JOURNAL OF VIROLOGY, (1998 Jun) 72 (6) 5224-30.
Journal code: 0113724. ISSN: 0022-538X.

L32 ANSWER 173 OF 244 MEDLINE DUPLICATE 114
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containing Rep-binding site mutations in the viral p5 promoter.
SO JOURNAL OF VIROLOGY, (1998 Jun) 72 (6) 4811-8.
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coagulation factor IX into mouse liver.
SO BLOOD, (1998 Jun 15) 91 (12) 4600-7.
Journal code: 7603509. ISSN: 0006-4971.

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GTP-cyclohydrolase I in a rat model of Parkinson's disease.
SO JOURNAL OF NEUROSCIENCE, (1998 Jun 1) 18 (11) 4271-84.
Journal code: 8102140. ISSN: 0270-6474.

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salivary epithelial cells in vitro and in vivo.
SO HUMAN GENE THERAPY, (1998 Dec 10) 9 (18) 2777-85.
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infection in differentiated airway epithelia.
SO HUMAN GENE THERAPY, (1998 Dec 10) 9 (18) 2761-76.
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SO HUMAN GENE THERAPY, (1998 Dec 10) 9 (18) 2745-60.
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following transplantation of adenoassociated virus vector-transduced CD34+
cells.
SO HUMAN GENE THERAPY, (1998 Dec 10) 9 (18) 2727-34.
Journal code: 9008950. ISSN: 1043-0342.

L32 ANSWER 180 OF 244 MEDLINE DUPLICATE 121
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SO JOURNAL OF VIROLOGY, (1998 Mar) 72 (3) 2224-32.
Journal code: 0113724. ISSN: 0022-538X.

L32 ANSWER 181 OF 244 MEDLINE DUPLICATE 122
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adenoassociated virus vectors for gene therapy.
SO HUMAN GENE THERAPY, (1998 Sep 1) 9 (13) 1929-37.
Journal code: 9008950. ISSN: 1043-0342.

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gene-modified tumor vaccines: evidence for a high transduction efficiency
into primary epithelial cancer cells.
SO HUMAN GENE THERAPY, (1998 May 1) 9 (7) 1049-59.
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SO HUMAN GENE THERAPY, (1998 Mar 20) 9 (5) 695-706.
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Journal code: 9509932. ISSN: 1079-9796.

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SO AMERICAN JOURNAL OF OTOLOGY, (1998 May) 19 (3) 390-5.
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SO HAEMOPHILIA, (1998 Jul) 4 (4) 389-92. Ref: 20
Journal code: 9442916. ISSN: 1351-8216.

L32 ANSWER 187 OF 244 MEDLINE DUPLICATE 126
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entrapment in multilamellar liposomes.
SO JAPANESE JOURNAL OF CANCER RESEARCH, (1998 Apr) 89 (4) 352-4.
Journal code: 8509412. ISSN: 0910-5050.

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TI Adeno-associated virus vector mediated gene transfer of HSVI- TK and its
effect on killing cancer cell
SO Zhonghua Shiyan He Linchuang Bingduxue Zazhi (1998), 12(3), 207-212
CODEN: ZSLZFS; ISSN: 1003-9279

L32 ANSWER 189 OF 244 MEDLINE DUPLICATE 127
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pathway by recombinant adeno-associated virus vectors.
SO EXPERIMENTAL NEUROLOGY, (1998 Apr) 150 (2) 183-94.
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vector into human chromosome 19.
SO ANNALS OF THE NEW YORK ACADEMY OF SCIENCES, (1998 Jun 30) 850 163-77.
Journal code: 7506858. ISSN: 0077-8923.

L32 ANSWER 191 OF 244 MEDLINE DUPLICATE 128
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SO HUMAN GENE THERAPY, (1998 Jan 1) 9 (1) 81-6.
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L32 ANSWER 193 OF 244 MEDLINE DUPLICATE 130
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virus 2-mediated transgene expression.
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF
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entirely supported by a herpes simplex virus type 1 amplicon expressing
Rep and Cap.
SO JOURNAL OF VIROLOGY, (1997 Nov) 71 (11) 8780-9.
Journal code: 0113724. ISSN: 0022-538X.

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marrow-derived CD34+ hematopoietic progenitor cells: donor variation and
correlation of transgene expression with cellular differentiation.
SO JOURNAL OF VIROLOGY, (1997 Nov) 71 (11) 8262-7.
Journal code: 0113724. ISSN: 0022-538X.

L32 ANSWER 196 OF 244 MEDLINE DUPLICATE 133
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and recombinant progeny virions: Rep-mediated growth inhibition of primary
human cells.
SO JOURNAL OF VIROLOGY, (1997 Oct) 71 (10) 7361-71.
Journal code: 0113724. ISSN: 0022-538X.

L32 ANSWER 197 OF 244 MEDLINE DUPLICATE 134
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SO JOURNAL OF VIROLOGY, (1997 Aug) 71 (8) 5932-41.
Journal code: 0113724. ISSN: 0022-538X.

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Journal code: 7505876. ISSN: 0027-8424.

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vector production.
SO JOURNAL OF VIROLOGY, (1997 Jul) 71 (7) 5236-43.
Journal code: 0113724. ISSN: 0022-538X.

L32 ANSWER 200 OF 244 MEDLINE DUPLICATE 137
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SO INVESTIGATIVE OPHTHALMOLOGY AND VISUAL SCIENCE, (1997 Dec) 38 (13)
2857-63.
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for rep and cap gene products.
SO JOURNAL OF VIROLOGY, (1997 Mar) 71 (3) 1897-905.
Journal code: 0113724. ISSN: 0022-538X.

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SO HUMAN GENE THERAPY, (1997 Nov 1) 8 (16) 1891-900.
Journal code: 9008950. ISSN: 1043-0342.

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SO JOURNAL OF VIROLOGY, (1997 Mar) 71 (3) 1776-83.
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protein (Flexi-12): delivery to acute myeloid leukemic blasts using adeno-associated virus.
SO HUMAN GENE THERAPY, (1997 Jun 10) 8 (9) 1125-35.
Journal code: 9008950. ISSN: 1043-0342.

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SO CURRENT EYE RESEARCH, (1997 Sep) 16 (9) 949-56.
Journal code: 8104312. ISSN: 0271-3683.

L32 ANSWER 206 OF 244 MEDLINE DUPLICATE 141
TI **Gene transfer** of the costimulatory molecules B7-1 and B7-2 into human multiple myeloma cells by **recombinant adeno-associated** virus **enhances** the cytolytic T cell response.
SO GENE THERAPY, (1997 Jul) 4 (7) 726-35.
Journal code: 9421525. ISSN: 0969-7128.

L32 ANSWER 207 OF 244 MEDLINE DUPLICATE 142
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human wild-type p53.
SO GENE THERAPY, (1997 Jul) 4 (7) 675-82.
Journal code: 9421525. ISSN: 0969-7128.

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SO CIRCULATION RESEARCH, (1997 Apr) 80 (4) 497-505.
Journal code: 0047103. ISSN: 0009-7330.

L32 ANSWER 209 OF 244 MEDLINE DUPLICATE 144
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SO NATURE MEDICINE, (1997 Mar) 3 (3) 306-12.
Journal code: 9502015. ISSN: 1078-8956.

L32 ANSWER 210 OF 244 MEDLINE DUPLICATE 145
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cells using electroporation.
SO JOURNAL OF VIROLOGICAL METHODS, (1997 Jan) 63 (1-2) 129-36.
Journal code: 8005839. ISSN: 0166-0934.

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SO EXPERIMENTAL NEUROLOGY, (1997 Mar) 144 (1) 113-24.
Ref: 81
Journal code: 0370712. ISSN: 0014-4886.

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gene delivery and expression into vascular cells.
SO JOURNAL OF INVESTIGATIVE MEDICINE, (1997 Feb) 45 (2) 87-98.
Journal code: 9501229. ISSN: 1081-5589.

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SO HUMAN GENE THERAPY, (1997 Jan 1) 8 (1) 87-98.
Journal code: 9008950. ISSN: 1043-0342.

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for wild-type-plus AAV gene therapy vectors.
SO FEBS LETTERS, (1997 Apr 21) 407 (1) 78-84.
Journal code: 0155157. ISSN: 0014-5793.

L32 ANSWER 215 OF 244 MEDLINE DUPLICATE 149
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SO JOURNAL OF REPRODUCTIVE IMMUNOLOGY, (1997 Dec 15) 37 (1) 25-34. Ref: 26
Journal code: 8001906. ISSN: 0165-0378.

L32 ANSWER 216 OF 244 MEDLINE DUPLICATE 150
TI Efficient transduction of green fluorescent protein in spinal cord neurons
using adeno-associated virus vectors containing cell type-specific promoters.
SO GENE THERAPY, (1997 Jan) 4 (1) 16-24.
Journal code: 9421525. ISSN: 0969-7128.

L32 ANSWER 217 OF 244 CAPLUS COPYRIGHT 2002 ACS

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SO PCT Int. Appl., 131 pp.
CODEN: PIXXD2

L32 ANSWER 218 OF 244 MEDLINE DUPLICATE 151
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SO JOURNAL OF VIROLOGY, (1996 Oct) 70 (10) 6759-66.
Journal code: 0113724. ISSN: 0022-538X.

L32 ANSWER 219 OF 244 MEDLINE DUPLICATE 152
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SO JOURNAL OF VIROLOGY, (1996 May) 70 (5) 3227-34.
Journal code: 0113724. ISSN: 0022-538X.

L32 ANSWER 220 OF 244 MEDLINE
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SO HUMAN GENE THERAPY, (1996 Nov 10) 7 (17) 2101-12.
Journal code: 9008950. ISSN: 1043-0342.

L32 ANSWER 221 OF 244 MEDLINE DUPLICATE 153
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SO JOURNAL OF VIROLOGY, (1996 Mar) 70 (3) 1845-54.
Journal code: 0113724. ISSN: 0022-538X.

L32 ANSWER 222 OF 244 MEDLINE
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SO HUMAN GENE THERAPY, (1996 Aug 20) 7 (13) 1515-25.
Journal code: 9008950. ISSN: 1043-0342.

L32 ANSWER 223 OF 244 MEDLINE DUPLICATE 154
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SO JOURNAL OF VIROLOGY, (1996 Jan) 70 (1) 520-32.
Journal code: 0113724. ISSN: 0022-538X.

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SO HUMAN GENE THERAPY, (1996 Mar 1) 7 (4) 463-70.
Journal code: 9008950. ISSN: 1043-0342.

L32 ANSWER 225 OF 244 MEDLINE DUPLICATE 155
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SO GENE THERAPY, (1996 May) 3 (5) 437-47.
Journal code: 9421525. ISSN: 0969-7128.

L32 ANSWER 226 OF 244 MEDLINE DUPLICATE 156
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SO JOURNAL OF PHARMACEUTICAL SCIENCES, (1996 Mar) 85 (3) 274-81.
Journal code: 2985195R. ISSN: 0022-3549.

L32 ANSWER 227 OF 244 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
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SO Blood, (1996) Vol. 88, No. 10 SUPPL. 1 PART 1-2, pp. 134A. Meeting Info.: Thirty-eighth Annual Meeting of the American Society of Hematology Orlando, Florida, USA December 6-10, 1996
ISSN: 0006-4971.

L32 ANSWER 228 OF 244 MEDLINE
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SO CYTOKINES AND MOLECULAR THERAPY, (1996 Jun) 2 (2) 69-79. Ref: 83
Journal code: 9509183. ISSN: 1355-6568.

L32 ANSWER 229 OF 244 CAPLUS COPYRIGHT 2002 ACS
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SO PCT Int. Appl., 29 pp.
CODEN: PIXXD2

L32 ANSWER 230 OF 244 MEDLINE DUPLICATE 157
TI Transduction of folate receptor cDNA into cervical carcinoma cells using recombinant adeno-associated virions delays cell proliferation in vitro and in vivo.
SO JOURNAL OF CLINICAL INVESTIGATION, (1995 Sep) 96 (3) 1535-47.
Journal code: 7802877. ISSN: 0021-9738.

L32 ANSWER 231 OF 244 MEDLINE
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SO HUMAN GENE THERAPY, (1995 Dec) 6 (12) 1531-41.
Journal code: 9008950. ISSN: 1043-0342.

L32 ANSWER 232 OF 244 MEDLINE DUPLICATE 158
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SO EXPERIMENTAL HEMATOLOGY, (1995 Nov) 23 (12) 1261-7.
Journal code: 0402313. ISSN: 0301-472X.

L32 ANSWER 233 OF 244 CAPLUS COPYRIGHT 2002 ACS
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SO Blood (1995), 85(3), 862
CODEN: BLOOAW; ISSN: 0006-4971

L32 ANSWER 234 OF 244 MEDLINE DUPLICATE 159
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SO GENE THERAPY, (1995 Sep) 2 (7) 481-5.
Journal code: 9421525. ISSN: 0969-7128.

L32 ANSWER 235 OF 244 MEDLINE DUPLICATE

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TI **Increased** titer of **recombinant AAV** vectors by **gene transfer** with adenovirus coupled to DNA-polylysine complexes.
SO GENE THERAPY, (1995 Aug) 2 (6) 429-32.
Journal code: 9421525. ISSN: 0969-7128.

L32 ANSWER 236 OF 244 MEDLINE DUPLICATE 161
TI An **improved** system for packaging **recombinant adeno-associated** virus vectors capable of in vivo **transduction**.
SO GENE THERAPY, (1995 Jan) 2 (1) 29-37.
Journal code: 9421525. ISSN: 0969-7128.

L32 ANSWER 237 OF 244 MEDLINE DUPLICATE 162
TI Recombinant adeno-associated virus (rAAV)-mediated expression of a human gamma-globin gene in human progenitor-derived erythroid cells.
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (1994 Oct 11) 91 (21) 10183-7.
Journal code: 7505876. ISSN: 0027-8424.

L32 ANSWER 238 OF 244 MEDLINE DUPLICATE 163
TI Adeno-associated virus 2-mediated high efficiency gene transfer into immature and mature subsets of hematopoietic progenitor cells in human umbilical cord blood.
SO JOURNAL OF EXPERIMENTAL MEDICINE, (1994 Jun 1) 179 (6) 1867-75.
Journal code: 2985109R. ISSN: 0022-1007.

L32 ANSWER 239 OF 244 MEDLINE DUPLICATE 164
TI Suppression of human alpha-globin gene expression mediated by the recombinant adeno-associated virus 2-based antisense vectors.
SO JOURNAL OF EXPERIMENTAL MEDICINE, (1994 Feb 1) 179 (2) 733-8.
Journal code: 2985109R. ISSN: 0022-1007.

L32 ANSWER 240 OF 244 MEDLINE DUPLICATE 165
TI Parvovirus-based vectors for human gene therapy.
SO BLOOD CELLS, (1994) 20 (2-3) 531-6; discussion 536-8. Ref: 20
Journal code: 7513567. ISSN: 0340-4684.

L32 ANSWER 241 OF 244 MEDLINE DUPLICATE 166
TI Single-copy **transduction** and expression of human gamma-globin in K562 erythroleukemia cells using **recombinant adeno-associated** virus vectors: the effect of mutations in NF-E2 and GATA-1 binding motifs within the hypersensitivity site 2 **enhancer** .
SO BLOOD, (1993 Sep 15) 82 (6) 1900-6.
Journal code: 7603509. ISSN: 0006-4971.

L32 ANSWER 242 OF 244 MEDLINE
TI Adeno-associated virus 2-mediated gene transfer in murine hematopoietic progenitor cells.
SO EXPERIMENTAL HEMATOLOGY, (1993 Jul) 21 (7) 928-33.
Journal code: 0402313. ISSN: 0301-472X.

L32 ANSWER 243 OF 244 MEDLINE DUPLICATE 167
TI Parvovirus B19-induced perturbation of human megakaryocytopoiesis in vitro.
SO BLOOD, (1990 Nov 15) 76 (10) 1997-2004.
Journal code: 7603509. ISSN: 0006-4971.

L32 ANSWER 244 OF 244 MEDLINE DUPLICATE 168
TI A human parvovirus, adeno-associated virus, as a eucaryotic vector: transient expression and encapsidation of the procaryotic gene for chloramphenicol acetyltransferase.
SO MOLECULAR AND CELLULAR BIOLOGY, (1984 Oct) 4 (10) 2072-81.
Journal code: 8109087. ISSN: 0270-7306.

=> d ibib ab
43,68,76,92,93,95,97,142,146,153,165,168,169,183,217,223,228,229

L32 ANSWER 43 OF 244 MEDLINE DUPLICATE 28
ACCESSION NUMBER: 2001451080 MEDLINE
DOCUMENT NUMBER: 21387900 PubMed ID: 11496950
TITLE: Protamine sulfate **enhances** the **transduction** efficiency of **recombinant adeno-associated** virus-mediated gene delivery.
AUTHOR: Yang Y W; Hsieh Y C
CORPORATE SOURCE: School of Pharmacy, College of Medicine, National Taiwan University, Taipei.. ywyang@ha.mc.ntu.edu.tw
SOURCE: PHARMACEUTICAL RESEARCH, (2001 Jul) 18 (7) 922-7.
Journal code: 8406521. ISSN: 0724-8741.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200201
ENTRY DATE: Entered STN: 20010813
Last Updated on STN: 20020125
Entered Medline: 20020103
AB PURPOSE: The purpose of this study was to evaluate glucose responsiveness in HepG2 human hepatoma cells transduced by a **recombinant adeno-associated** virus (**rAAV**) vector containing the insulin gene promoter. and to investigate the effect of protamine sulfate on **rAAV**-mediated gene delivery. METHODS: **Recombinant AAV** vector, AAV.Ins.Luc.delta EGFP, was employed to transduce HepG2 hepatoma cells. Virus **infection** was carried out either in the absence or presence of protamine sulfate, followed by fluorescence microscopic examination, luciferase activity assay, and flow cytometric analysis. Electrokinetic measurements were carried out to determine the effect of protamine sulfate on zeta potential of the cells and the virus. RESULTS: Glucose-responsive luciferase gene expression was obtained in **rAAV**-transduced HepG2 cells. Addition of 5 microg/ml protamine reversed the zeta potential of the cells and the virus particles, leading to **enhanced** transgene expression in **rAAV**-transduced HepG2 cells. **Enhancement** of protamine sulfate on **rAAV**-mediated **gene transfer** was dose-dependent. Addition of more than 5 microg/ml protamine resulted in a reduction of **infectability** of the virus. CONCLUSIONS: Glucose responsiveness in the millimolar concentration range can be obtained in **rAAV**-transduced HepG2 cells. Protamine sulfate, up to 5 microg/ml, **enhanced** the **rAAV transduction** efficiency in HepG2 cells. The **enhancement** was correlated with zeta potential of the cells and the virus.

L32 ANSWER 68 OF 244 MEDLINE
ACCESSION NUMBER: 2001302405 MEDLINE
DOCUMENT NUMBER: 21138550 PubMed ID: 11237679
TITLE: Combined injection of rAAV with mannitol enhances

gene
expression in the rat brain.
AUTHOR: Mastakov M Y; Baer K; Xu R; Fitzsimons H; During M J
CORPORATE SOURCE: Functional Genomics and Translational Neuroscience
Laboratory, Division of Molecular Medicine, Faculty of Medical and Health Sciences, University of Auckland, Auckland, New Zealand.
CONTRACT NUMBER: RO1 NS39144 (NINDS)
SOURCE: MOLECULAR THERAPY, (2001 Feb) 3 (2) 225-32.
Journal code: 100890581. ISSN: 1525-0016.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200105
ENTRY DATE: Entered STN: 20010604
Last Updated on STN: 20010604
Entered Medline: 20010531
AB **Recombinant adeno-associated** viruses (**rAAV**) are highly efficient vectors for **gene transfer** into the central nervous system (CNS). However, a major hurdle for gene delivery to the mammalian brain is to achieve high-level **transduction** in target cells beyond the immediate injection site. Therefore, in addition to **improvements** in expression cassettes and viral titers, optimal injection parameters need to be defined. Here, we show that previous studies of somatic cell **gene transfer** to the mammalian brain have used suboptimal injection parameters, with even the lowest reported perfusion rates still excessively fast. Moreover, we evaluated the effect of local administration of mannitol to further **enhance** transgene expression and vector spread. Ultraslow microperfusion of **rAAV**, i.e., <33 nl/min, resulted in significantly higher gene expression and less injury of surrounding tissue than the previously reported rates of 100 nl/min or faster. Co-infusion of mannitol facilitated **gene transfer** to neurons, **increasing** both the total number and the distribution of transduced cells by 200-300%. **Gene transfer** studies in the CNS using **rAAV** should use very slow infusion rates and combined injection with mannitol to maximize **transduction** efficiency and spread.

L32 ANSWER 76 OF 244 MEDLINE
ACCESSION NUMBER: 2001321400 MEDLINE
DOCUMENT NUMBER: 21066306 PubMed ID: 11139798
TITLE: Gene therapy: recombinant adeno-associated virus vectors.
AUTHOR: Smith-Arica J R; Bartlett J S
CORPORATE SOURCE: Children's Research Institute, W531, 700 Children's Drive,
Columbus, OH, 43205-2696, USA..
SmithJ@pediatrics.ohio-state.edu
SOURCE: CURRENT CARDIOLOGY REPORTS, (2001 Jan) 3 (1) 43-9. Ref: 62
Journal code: 100888969. ISSN: 1523-3782.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200106
ENTRY DATE: Entered STN: 20010611
Last Updated on STN: 20010611
Entered Medline: 20010607
AB **Gene transfer** using **recombinant adeno-associated** virus (**rAAV**) vectors shows great promise for human gene therapy. The broad host range, low level of immune response, and longevity of gene expression observed with these vectors in numerous disease paradigms has enabled the initiation of a number of clinical trials using this gene delivery system. This review presents an overview of the current developments in the field of AAV-mediated gene delivery. Such developments include the establishment of new production methods allowing the generation of high titer preparations, **improved** purification methods, the use of alternative AAV serotypes, and the generation of trans-splicing **rAAV** genomes. Together, these developments have **improved** results interpretation, host range, and the coding capacity of **rAAV** vectors. Furthermore, the recent identification of regions within the viral capsid that are amenable to modification has begun to address the issue of direct **rAAV** vector targeting, which could potentially allow targeted gene delivery to specific cell populations. The versatility shown by this vector has enabled new diseases to be realistically considered for therapeutic intervention and considerably broadened the scope of gene therapy.

L32 ANSWER 92 OF 244 MEDLINE DUPLICATE 57
ACCESSION NUMBER: 2000404826 MEDLINE
DOCUMENT NUMBER: 20300766 PubMed ID: 10841516
TITLE: Endosomal processing limits gene transfer to polarized airway epithelia by adeno-associated virus.
AUTHOR: Duan D; Yue Y; Yan Z; Yang J; Engelhardt J F
CORPORATE SOURCE: Department of Anatomy and Cell Biology, Center for Gene
Therapy, College of Medicine, University of Iowa, Iowa City, Iowa, USA.
CONTRACT NUMBER: DK54759 (NIDDK)
RO1 HL58340 (NHLBI)
SOURCE: JOURNAL OF CLINICAL INVESTIGATION, (2000 Jun) 105 (11)
1573-87.
Journal code: 7802877. ISSN: 0021-9738.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200008
ENTRY DATE: Entered STN: 20000901
Last Updated on STN: 20000901
Entered Medline: 20000824
AB The restriction of viral receptors and coreceptors to the basolateral surface of airway epithelial cells has been blamed for the inefficient transfer of viral vectors to the apical surface of this tissue. We now report, however, that differentiated human airway epithelia internalize **rAAV** type-2 virus efficiently from their apical surfaces, despite the absence of known adeno-associated virus-2 (AAV-2) receptors or coreceptors at these sites. The dramatically lower **transduction** efficiency of **rAAV infection** from the apical surface of airway cells appears to result instead from differences in endosomal processing and nuclear trafficking of apically or basolaterally internalized virions. AAV capsid proteins are ubiquitinated after endocytosis, and **gene transfer** can be significantly **enhanced** by proteasome or ubiquitin ligase **inhibitors**. Tripeptide proteasome **inhibitors increased** persistent **rAAV** gene delivery from the apical surface >200-fold, to a level nearly equivalent to that achieved with basolateral **infection**. In vivo application of proteasome **inhibitor** in mouse lung **augmented rAAV gene transfer** from undetectable levels to a mean of 10.4 +/- 1.6% of the epithelial cells in large bronchioles. Proteasome **inhibitors** also **increased rAAV**-2-mediated **gene transfer** to the liver tenfold, but they did not affect **transduction** of skeletal or cardiac muscle. These findings suggest that tissue-specific

ubiquitination
of viral capsid proteins interferes with **rAAV**-2 **transduction** and provides new approaches to circumvent this barrier for gene therapy of diseases such as cystic fibrosis.

L32 ANSWER 93 OF 244 MEDLINE DUPLICATE 58
ACCESSION NUMBER: 2000455715 MEDLINE
DOCUMENT NUMBER: 20434548 PubMed ID: 10981669
TITLE: Hyaluronidase **enhances recombinant adeno-associated** virus (**rAAV**)-mediated **gene transfer** in the rat skeletal muscle.
AUTHOR: Favre D; Cherel Y; Provost N; Blouin V; Ferry N; Moullier P; Salvetti A
CORPORATE SOURCE: Laboratoire de Therapie Genique, CHU Hotel-Dieu, Nantes, France.
SOURCE: GENE THERAPY, (2000 Aug) 7 (16) 1417-20. Journal code: 9421525. ISSN: 0969-7128.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200009
ENTRY DATE: Entered STN: 20001005
Last Updated on STN: 20001005
Entered Medline: 20000926
AB Skeletal muscle is a privileged target for long-term **rAAV**-mediated **gene transfer** in mouse, rat, dog and non-human primates. Intramuscular injections of **rAAV** encoding human factor IX in hemophilia B patients have been initiated, based on promising results gathered in affected dogs. We found that intramuscular **rAAV** administration in rats resulted in restricted **transduction** essentially along the myofibers axis with poor lateral diffusion. This suggested that the **transduction** rate might be limited by the ability of the virus to reach sites distant from the injection point. We tested whether hyaluronidase, an enzyme which dissociates the extracellular matrix, could **enhance** vector diffusion when injected in the rat muscle before administration of **rAAV** encoding either nuclear-localized beta-galactosidase (rAAVCMVnlsLacZ) or the human alpha-1-antitrypsin (rAAVCMVhAAT) under the control of the cytomegalovirus immediate--early promoter (CMV). The results showed that pretreatment of the rat anterior tibialis muscle with hyaluronidase resulted in: (1) a larger diffusion of the virus indicated by an **increase** in the area containing LacZ-transduced fibers, and (2) a two- to three-fold **increase** of **transduction** efficiency measured by the number of LacZ-positive fibers or by the hAAT serum concentration. We also provide evidence that hyaluronidase was well tolerated and was not associated with short- or long-term toxicity evaluated by morphological studies. Finally, in our experimental conditions, hyaluronidase did not promote **rAAV** dissemination to other organs as assessed by PCR to detect vector sequences. We conclude that pretreatment of skeletal muscle by hyaluronidase, a clinically available reagent, was harmless and resulted in a consistent and significant **increase** in **rAAV** diffusion and **transduction** levels.

L32 ANSWER 95 OF 244 MEDLINE DUPLICATE 60
ACCESSION NUMBER: 2001029230 MEDLINE
DOCUMENT NUMBER: 20504261 PubMed ID: 11050056
TITLE: Chronic ethanol increases adeno-associated viral transgene expression in rat liver via oxidant and NFkappaB-dependent mechanisms.
AUTHOR: Wheeler M D; Kono H; Rusyn I; Arteel G E; McCarty D; Samulski R J; Thurman R G
CORPORATE SOURCE: Laboratory of Hepatobiology and Toxicology, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA.. wheelmi@med.unc.edu
SOURCE: HEPATOLOGY, (2000 Nov) 32 (5) 1050-9. Journal code: 8302946. ISSN: 0270-9139.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200011
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20001121
AB **Recombinant adeno-associated** virus (**rAAV**) **transduction** is limited in vivo, yet can be **enhanced** by hydroxyurea, ultraviolet-irradiation, or adenovirus coinfection, possibly via mechanisms involving stress in the host cell. Because chronic ethanol induces oxidative stress, it was hypothesized that chronic ethanol would **increase** **rAAV** **transduction** in vivo. To test this hypothesis, **rAAV** encoding beta-galactosidase was given to Wistar rats that later received either ethanol diet or high-fat control diet via an enteral-feeding protocol for 3 weeks. Expression and activity of beta-galactosidase in the liver were **increased** nearly 5-fold by ethanol. The **increase** in transgene expression was **inhibited** by antioxidant diphenylene iodonium (DPI), which is consistent with the hypothesis that ethanol causes an **increase** in **rAAV** **transduction** via oxidative stress. Ethanol **increased** DNA synthesis only slightly; however, it **increased** the nuclear transcription factor kappaB (NFkappaB) 4-fold, a phenomenon also sensitive to DPI. Moreover, a 6-fold **increase** in **rAAV** transgene expression was observed in an acute ischemia-reperfusion model of oxidative stress. Transgene expression was transiently **increased** 24 hours after ischemia-reperfusion 3 days and 3 weeks after **rAAV** **infection**. Further, adenoviral expression of superoxide dismutase or IkappaBalpha superrepressor **inhibited** **rAAV** transgene expression caused by ischemia-reperfusion. Therefore, it is concluded that ethanol **increases** **rAAV** transgene expression via mechanisms dependent on oxidative stress, and NFkappaB likely through **enhancement** of cytomegaloviral (CMV) promoter elements. Alcoholic liver disease is an attractive target for gene therapy because consumption of ethanol could theoretically **increase** expression of therapeutic genes (e.g., superoxide dismutase). Moreover, this study has important implications for **rAAV** gene therapy and potential **enhancement** and regulation of transgene expression in liver.

L32 ANSWER 97 OF 244 MEDLINE DUPLICATE 62
ACCESSION NUMBER: 2001023788 MEDLINE
DOCUMENT NUMBER: 20354683 PubMed ID: 10898318
TITLE: Transduction of hepatocellular carcinoma (HCC) using recombinant adeno-associated virus (rAAV): in vitro and in vivo effects of genotoxic agents.
COMMENT: Comment in: J Hepatol. 2000 Jun;32(6):1031-4
AUTHOR: Peng D; Qian C; Sun Y; Barajas M A; Prieto J
CORPORATE SOURCE: Department of Internal Medicine, Clinica Universitaria and Medical School, University of Navarra, Pamplona, Spain.
SOURCE: JOURNAL OF HEPATOLOGY, (2000 Jun) 32 (6) 975-85. Journal code: 8503886. ISSN: 0168-8278.
PUB. COUNTRY: Denmark
Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200011
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20010702
Entered Medline: 20001116

AB BACKGROUND/AIMS: Adeno-associated virus (AAV) is an attractive tool for gene therapy. Here we investigated the in vitro and in vivo **transduction** of hepatocellular carcinoma (HCC) cells by an AAV vector and the efficacy of different strategies to **enhance** the **transduction** of the tumor. METHODS: **Transduction** efficiency was determined by analyzing AAV-mediated beta-galactosidase gene (**rAAV**/lacZ) expression. RESULTS: Adenovirus help or pretreatment of HCC cells with y-irradiation or with the topoisomerase **inhibitor** etoposide resulted in marked **enhancement** of cell **transduction** in vitro. In vivo studies in nude mice with subcutaneous HCC tumors showed that HCC cells were not transduced by AAV vector alone. However, co-**infection** of the tumor with adenovirus allowed an efficient expression of the reporter gene but only at the sites of vector injection. Previous gamma-irradiation of subcutaneous tumors with 1800 rad was able to **improve transduction** of HCC cells (up to 30%) using **recombinant AAV**. Continuous i.p. infusion of etoposide in buffalo rats harboring HCC tumors in the liver resulted in **transduction** of normal liver tissue and also of very small neoplastic lesions (<2 mm) but no **transduction** was observed in tumors bigger than 2 mm. To analyze this phenomenon we determined etoposide concentration in hepatic tissue. Our results revealed high concentrations of the drug in non-tumoral tissue but almost undetectable levels in big tumor nodules. CONCLUSIONS: Our results indicate that while both radiotherapy and etoposide **enhance** **transduction** of tumor cells by **rAAV** in vitro, only radiotherapy **increases** tumor **transduction** in vivo. Our data suggest the existence of a barrier which limits in vivo the diffusion of chemotherapeutic agents to well-established HCC nodules.

L32 ANSWER 142 OF 244 MEDLINE DUPLICATE 89
ACCESSION NUMBER: 1999398756 MEDLINE
DOCUMENT NUMBER: 99398756 PubMed ID: 10467367
TITLE: Cellular redox state alters recombinant adeno-associated virus transduction through tyrosine phosphatase pathways.
AUTHOR: Sanlioglu S; Engelhardt J F
CORPORATE SOURCE: Department of Anatomy and Cell Biology and Department of Internal Medicine at the University of Iowa College of Medicine, Iowa City, Iowa 52242, USA.
CONTRACT NUMBER: DK54759 (NIDDK)
R01 DK/HL58340 (NIDDK)
SOURCE: GENE THERAPY, (1999 Aug) 6 (8) 1427-37.
Journal code: 9421525. ISSN: 0969-7128.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200003
ENTRY DATE: Entered STN: 20000320
Last Updated on STN: 20000320
Entered Medline: 20000308

AB Several types of environmental damage including UV, hydroxyurea and ionizing irradiation have been shown to **augment rAAV** **transduction**. Current hypotheses suggest that these environmental stimuli lead to the **enhanced** production and/or activation of cellular factors important in the conversion of single-stranded DNA genomes to expressible forms. However, the mechanisms of action are currently unknown. We hypothesized that reactive oxygen intermediates (ROI) may play a common role in the **augmentation** of **rAAV** **transduction** by these environmental stimuli. Our results demonstrate that treatment with hydrogen peroxide can give equivalent or greater levels of **augmentation** in **rAAV** **transduction** as that seen by hydroxyurea or UV irradiation. For all environmental stimuli, pretreatment with the hydroxyl radical (H0 small middle dot) scavenger, N-acetyl-L-cysteine (NAC), completely blocked **augmentation** of **rAAV transduction**. Furthermore, using electron spin resonance spectroscopy (ESR), we demonstrated that both UV and H2O2 treatment of cell lines lead to the induction of H0 small middle dot radicals. Our results demonstrating that NaOV **inhibits** the **augmentation** of **rAAV** **transduction** following UV and H2O2 treatment, implicate H0 small middle dot radicals as modulators of tyrosine phosphatase pathways involved in **rAAV transduction**. Alterations in the cellular redox state and subsequent activation of tyrosine phosphatase pathways appear to alter the phosphorylation status of the previously identified single-stranded sequence binding protein (ssD-BP), with reduced phosphorylation correlating with an **enhancement** in **rAAV** **transduction**. In summary, we conclude that the cellular redox state may play an important role in regulating **rAAV** **transduction**.

L32 ANSWER 146 OF 244 MEDLINE DUPLICATE 93
ACCESSION NUMBER: 1999387165 MEDLINE
DOCUMENT NUMBER: 99387165 PubMed ID: 10455407
TITLE: Cellular contaminants of adeno-associated virus vector stocks can enhance transduction.
AUTHOR: Tenenbaum L; Hamdane M; Pouzet M; Avalosse B; Stathopoulos A; Jurysta F; Rosenbaum C; Hanemann C O; Levivier M; Velu T
CORPORATE SOURCE: IRIBHN, Campus Erasme, Universite Libre de Bruxelles, Germany.
SOURCE: GENE THERAPY, (1999 Jun) 6 (6) 1045-53.
Journal code: 9421525. ISSN: 0969-7128.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200002
ENTRY DATE: Entered STN: 20000309
Last Updated on STN: 20000915
Entered Medline: 20000224

AB **Transduction** efficiency of different types of recombinant (r)AAV-2 based vectors preparations markedly differed, with apparently no correlation with the replicative titers. Using HeLa cells as target for **transduction**, 105 and 30 **infectious** units were necessary to observe one **transductant** using respectively cesium-chloride-purified **rAAV** and crude lysates of producer cells obtained by sonication. The purified vectors were however able to transduce HEK-193 cells efficiently, but transgene expression was detected with some delay compared with crude lysates. The unexpected high **transduction** efficiency of sonicated crude lysates was due to virally mediated **gene transfer**, since similar sonicated crude lysates, but with no AAV rep and cap genes, did not lead to detection of transgene products after incubation with HeLa cells. Furthermore, sonicated cellular extracts of 293 or 293/T cells given in

trans stimulate **transduction** of HeLa cells by purified **rAAV**. In contrast, neither extracts from the adenovirus E1-transformed 911 cell line, nor from other cell lines not harboring any adenovirus gene, had **enhancing** effect on **rAAV**-mediated **transduction**. These data suggest that 293 sonicated extracts contain factors which stimulate **rAAV**-mediated **transduction** of cells that are normally poorly transduced and offer a system to identify such factors and to characterize further the steps limiting the transfer of gene by AAV vectors.

L32 ANSWER 153 OF 244 MEDLINE DUPLICATE 99
ACCESSION NUMBER: 1999191990 MEDLINE
DOCUMENT NUMBER: 99191990 PubMed ID: 10094202
TITLE: Two independent molecular pathways for **recombinant adeno-associated** virus genome conversion occur after UV-C and E4orf6 **augmentation** of **transduction**.
AUTHOR: Sanlioglu S; Duan D; Engelhardt J F
CORPORATE SOURCE: Department of Anatomy and Cell Biology, University of Iowa School of Medicine, Iowa City 52242, USA.
CONTRACT NUMBER: R01 DK/HL58340 (NIDDK)
SOURCE: HUMAN GENE THERAPY, (1999 Mar 1) 10 (4) 591-602. Journal code: 9008950. ISSN: 1043-0342.
PUB. COUNTRY: United States Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199904
ENTRY DATE: Entered STN: 19990517 Last Updated on STN: 19990517 Entered Medline: 19990430
AB Numerous environmental influences have been demonstrated to **enhance recombinant adeno-associated** virus (**rAAV**) **transduction**. Such findings are the foundation of developing new and innovative strategies to **improve** the efficiency of **rAAV** as a gene therapy vector. Several of these environmental factors included genotoxic stresses such as UV and y irradiation as well as certain adenoviral gene products such as E4orf6.
The mechanisms by which these environmental stimuli **increase rAAV transduction** are only partially understood but have been suggested to involve both endocytosis and uptake of virus to the nucleus, as well as conversion of single-stranded DNA viral genomes to double-stranded expressible forms. Two molecular intermediates of **rAAV** genomes, which have been demonstrated to correlate with transgene expression and/or the persistence of **rAAV**, include both replication form (Rf) monomers and dimers as well as circular intermediates. In the present study, we demonstrate that **augmentation** of **rAAV transduction** by UV irradiation and the adenoviral protein E4orf6 correlates with distinct **increases** in either circular or replication form intermediates, respectively. UV irradiation of primary fibroblasts at 15 J/m2 resulted in a 15-fold induction of head-to-tail circular intermediates, with minimal induction of replication form **rAAV** genomes. In contrast, E4orf6-**augmented rAAV transduction** was correlated with the formation of replication form intermediates, with no alteration in the abundance of circular intermediates. These findings demonstrate that **rAAV transduction** can occur through two independent molecular pathways that convert single-stranded AAV genomes to expressible forms of DNA.

L32 ANSWER 165 OF 244 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:159708 CAPLUS
DOCUMENT NUMBER: 131:1162
TITLE: Adeno-associated viral vectors
AUTHOR(S): Samulski, Richard Jude; Sally, Mitch; Muzyczka, Nicholas
CORPORATE SOURCE: University of North Carolina Gene Therapy Center and Department of Pharmacology, University of North Carolina at Chapel Hil, Chapel Hill, NC, USA
SOURCE: Cold Spring Harbor Monograph Series (1999), 36(Development of Human Gene Therapy), 131-172 CODEN: CHMSDK; ISSN: 0270-1847
PUBLISHER: Cold Spring Harbor Laboratory Press
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with over 100 refs. Topics include: **recombinant AAV** vectors, **transduction** of nondividing cells, episomal expression, adeno-assocd. virus integration, **recombinant AAV** vector integration, mechanism of AAV integration, **transduction** in vivo, and **enhancement** of **rAAV transduction** in vivo.
REFERENCE COUNT: 126 THERE ARE 126 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 168 OF 244 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:734970 CAPLUS
DOCUMENT NUMBER: 129:340538
TITLE: Increasing transduction of cells by adeno-associated virus vectors by using DNA metabolism-altering agents
INVENTOR(S): Alexander, Ian E.; Russell, David W.; Miller, A. Dusty
PATENT ASSIGNEE(S): Fred Hutchinson Cancer Research Center, USA
SOURCE: U.S., 12 pp., Cont.-in-part of U.S. 5,604,090. CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5834182	A	19981110	US 1997-750274	19970225
US 5604090	A	19970218	US 1994-254312	19940606
WO 9533824	A1	19951214	WO 1995-US7202	19950605

W: AU, CA, JP, US
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
PRIORITY APPLN. INFO.: US 1994-254312 19940606
WO 1995-US7202 19950605
AB This invention includes methods for **increasing** the efficiency of **transduction** of cells, including non-dividing cells, by **recombinant adeno-assocd**. adenovirus (AAV) vectors. The methods utilize agents that alter certain aspects of DNA metab., more specifically, that affect DNA synthesis and/or affect repair, that impact on maintenance of chromosomal integrity, and/or that cause damage to the cellular DNA. Agents and vectors can now also be preselected and screened for transducing ability and/or transducing agents for their effect on DNA metab. These agents include tritiated nucleotides such as thymidine, gamma irradn., UV irradn., cis-platinum, etoposide, hydroxyurea and aphidicolin.

L32 ANSWER 169 OF 244 MEDLINE DUPLICATE 110
ACCESSION NUMBER: 1999080060 MEDLINE
DOCUMENT NUMBER: 99080060 PubMed ID: 9861016

TITLE: Viral mediated expression of insulin-like growth factor I blocks the aging-related loss of skeletal muscle function.
AUTHOR: Barton-Davis E R; Shoturma D I; Musaro A; Rosenthal N; Sweeney H L
CORPORATE SOURCE: Department of Physiology, A700 Richards Building, University of Pennsylvania School of Medicine, Philadelphia, PA 19104-6085, USA.
CONTRACT NUMBER: P01-AG13329 (NIA) P01-AR/NS43648 (NIAMS)
SOURCE: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (1998 Dec 22) 95 (26) 15603-7.
Journal code: 7505876. ISSN: 0027-8424.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199901
ENTRY DATE: Entered STN: 19990209
Last Updated on STN: 20020212
Entered Medline: 19990128

AB During the aging process, mammals lose up to a third of their skeletal muscle mass and strength. Although the mechanisms underlying this loss are not entirely understood, we attempted to moderate the loss by **increasing** the regenerative capacity of muscle. This involved the injection of a **recombinant adeno-associated** virus directing overexpression of insulin-like growth factor I (IGF-I) in differentiated muscle fibers. We demonstrate that the IGF-I expression promotes an average **increase** of 15% in muscle mass and a 14% **increase** in strength in young adult mice, and remarkably, prevents aging-related muscle changes in old adult mice, resulting in a 27% **increase** in strength as compared with uninjected old muscles. Muscle mass and fiber type distributions were maintained at levels similar to those in young adults. We propose that these effects are primarily due to stimulation of muscle regeneration via the activation of satellite cells by IGF-I. This supports the hypothesis that the primary cause of aging-related impairment of muscle function is a cumulative failure to repair damage sustained during muscle utilization. Our results suggest that **gene transfer** of IGF-I into muscle could form the basis of a human gene therapy for preventing the loss of muscle function associated with aging and may be of benefit in diseases where the rate of damage to skeletal muscle is accelerated.

L32 ANSWER 183 OF 244 MEDLINE DUPLICATE 124
ACCESSION NUMBER: 1998211339 MEDLINE
DOCUMENT NUMBER: 98211339 PubMed ID: 9551617
TITLE: Factors influencing recombinant adeno-associated virus production.
AUTHOR: Salvetti A; Oreve S; Chadeuf G; Favre D; Cherel Y; Champion-Arnaud P; David-Ameline J; Moullier P
CORPORATE SOURCE: Laboratoire de Therapie Genique, CHU Hotel-DIEU, Nantes, France.
SOURCE: HUMAN GENE THERAPY, (1998 Mar 20) 9 (5) 695-706.
Journal code: 9008950. ISSN: 1043-0342.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199805
ENTRY DATE: Entered STN: 19980611
Last Updated on STN: 19980611
Entered Medline: 19980529

AB **Recombinant adeno-associated** virus (**rAAV**) is produced by transfecting cells with two constructs: the **rAAV** vector plasmid and the rep-cap plasmid. After subsequent adenoviral **infection**, needed for **rAAV** replication and assembly, the virus is purified from total cell lysates through CsCl gradients. Because this is a long and complex procedure, the precise titration of **rAAV** stocks, as well as the measure of the level of contamination with adenovirus and rep-positive AAV, are essential to evaluate the **transduction** efficiency of these vectors in vitro and in vivo. Our vector core is in charge of producing **rAAV** for outside investigators as part of a national network promoted by the Association Francaise contre les Myopathies/Genethon. We report here the characterization of 18 large-scale **rAAV** stocks produced during the past year. Three major **improvements** were introduced and combined in the **rAAV** production procedure: (i) the titration and characterization of **rAAV** stocks using a stable rep-cap HeLa cell line in a modified Replication Center Assay (RCA); (ii) the use of different rep-cap constructs to provide AAV regulatory and structural proteins; (iii) the use of an adenoviral plasmid to provide helper functions needed for **rAAV** replication and assembly. Our results indicate that: (i) **rAAV** yields ranged between 10(11) to 5 x 10(12) total particles; (ii) the physical particle to **infectious** particle (measured by RCA) ratios were consistently below 50 when using a rep-cap plasmid harboring an ITR-deleted AAV genome; the physical particle to transducing particle ratios ranged between 400 and 600; (iii) the use of an adenoviral plasmid instead of an **infectious** virion did not affect the particles or the **infectious** particles yields nor the above ratio. Most of large-scale **rAAV** stocks (7/9) produced using this plasmid were free of detectable **infectious** adenovirus as determined by RCA; (iv) all the **rAAV** stocks were contaminated with rep-positive AAV as detected by RCA. In summary, this study describes a general method to titrate **rAAV**, independently of the transgene and its expression, and to measure the level of contamination with adenovirus and rep-positive AAV. Furthermore, we report a new production procedure using adenoviral plasmids instead of virions and resulting in **rAAV** stocks with undetectable adenovirus contamination.

L32 ANSWER 217 OF 244 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:101610 CAPLUS
DOCUMENT NUMBER: 126:100286
TITLE: **Recombinant adeno-associated** virus, method for **enhancing transduction** of target cells with these viruses and pharmaceutical compositions containing the viruses
INVENTOR(S): Wilson, James M.; Fisher, Krishna J.; Gao, Guang-Ping
PATENT ASSIGNEE(S): Trustees of the University of Pennsylvania, USA; Wilson, James M.; Fisher, Krishna J.; Gao, Guang-Ping
SOURCE: PCT Int. Appl., 131 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9639530	A2	19961212	WO 1996-US10245	19960604
WO 9639530	A3	19970605		

W: AL, AM, AU, AZ, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IL,

IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LV, MD, MG, MK, MN,
MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, TJ, TM, TR, TT, UA,
UG, US
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR,
IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML,
MR, NE, SN, TD, TG

US 5756283	A	19980526	US 1995-462014	19950605
US 6281010	B1	20010828	US 1995-549489	19951027
AU 9662779	A1	19961224	AU 1996-62779	19960604
AU 715533	B2	20000203		
EP 835321	A2	19980415	EP 1996-921586	19960604

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, FI

JP 11507240	T2	19990629	JP 1996-502258	19960604
US 6261551	B1	20010717	US 1997-973334	19971205

PRIORITY APPLN. INFO.: US 1995-462014 A2 19950605
US 1995-549489 A 19951027
WO 1996-US10245 W 19960604

AB A method for **enhancing** the efficiency of **transduction** of a **recombinant adeno-assocd.** virus (AAV) into a target cell is provided. The infected cell is contacted with an agent which facilitates the conversion of single-stranded recombinant virus to its double-stranded form. The agent may be an adenovirus E1 and/or E4 gene, which may be provided by a helper adenovirus, or which may be present as an inducible gene(s) in the AAV vector. Expts. reported herein indicated that recombinant AAV is a relatively inefficient gene transfer vehicle and that the rate-limiting step in transduction in conversion of the virion's single-stranded DNA genome to a transcriptionally active double-stranded form. Adenovirus, and more specifically the E1 and E4 genes, enhanced transduction. A recombinant AAV contg. a chimeric glucocorticoid-dependent promoter-E4 gene was produced. HeLa cells in the presence of dexamethasone expressed the E4 gene and the transduction efficiency was increased 5-fold (over that in the absence of dexamethasone).

L32 ANSWER 223 OF 244 MEDLINE DUPLICATE 154
ACCESSION NUMBER: 96099466 MEDLINE
DOCUMENT NUMBER: 96099466 PubMed ID: 8523565
TITLE: Transduction with recombinant adeno-associated virus for gene therapy is limited by leading-strand synthesis.
AUTHOR: Fisher K J; Gao G P; Weitzman M D; DeMatteo R; Burda J F; Wilson J M
CORPORATE SOURCE: Institute for Human Gene Therapy, University of Pennsylvania Health System, Philadelphia, USA.
SOURCE: JOURNAL OF VIROLOGY, (1996 Jan) 70 (1) 520-32.
Journal code: 0113724. ISSN: 0022-538X.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199601
ENTRY DATE: Entered STN: 19960219
Last Updated on STN: 19970203
Entered Medline: 19960125

AB Adeno-associated virus is an integrating DNA parvovirus with the potential to be an important vehicle for somatic gene therapy. A potential barrier, however, is the low **transduction** efficiencies of **recombinant adeno-associated** virus (**rAAV**) vectors. We show in this report that adenovirus dramatically **enhances rAAV transduction** in vitro in a way that is dependent on expression of early region 1 and 4 (E1 and E4, respectively) genes and directly proportional to the appearance of double-stranded replicative forms of the **rAAV** genome. Expression of the open reading frame 6 protein from E4 in the absence of E1 accomplished a similar but attenuated effect. The helper activity of adenovirus E1 and E4 for **rAAV gene transfer** was similarly demonstrated in vivo by using murine models of liver- and lung-directed gene therapy. Our data indicate that conversion of a single-stranded **rAAV** genome to a duplex intermediate limits **transduction** and usefulness for gene therapy.

L32 ANSWER 228 OF 244 MEDLINE
ACCESSION NUMBER: 1998029516 MEDLINE
DOCUMENT NUMBER: 98029516 PubMed ID: 9384691
TITLE: Recombinant adeno-associated virus (rAAV) vectors for somatic gene therapy: recent advances and potential clinical applications.
AUTHOR: Hallek M; Wendtner C M
CORPORATE SOURCE: Laboratorium fur Molekulare Biologie, Genzentrum, Ludwig-Maximilians-Universitat, Munchen, Germany.. hallek@lmb.uni-muenchen.de
SOURCE: CYTOKINES AND MOLECULAR THERAPY, (1996 Jun) 2 (2) 69-79.
Ref: 83
Journal code: 9509183. ISSN: 1355-6568.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals; AIDS
ENTRY MONTH: 199712
ENTRY DATE: Entered STN: 19980109
Last Updated on STN: 19980109
Entered Medline: 19971208

AB Adeno-associated virus (AAV) is a single-stranded DNA dependovirus of the family of Parvoviridae that has promising features as a vector for somatic gene therapy. Different recombinant (r) AAV vectors have been generated that seem to have some advantages compared with other vector systems, such as the **transduction** of terminally differentiated and non-dividing cells, the lack of any apparent pathogenicity, low immunogenicity, relatively high stability of transgene expression, and the potential of targeted integration. Recent **improvements** in **rAAV** packaging should allow the generation of sufficient quantities of **rAAV** for clinical trials. Preclinical studies with **rAAV** are currently being performed for the treatment of a variety of inherited monogenic defects, such as beta-thalassemia, sickle cell anemia. Fanconi anemia, chronic granulomatous disease, Gaucher disease, metachromatic leukodystrophy and cystic fibrosis, and of acquired diseases, such as HIV **infection** and non-Hodgkin lymphoma. The diversity of these studies indicates that **rAAV** might have a broad range of clinical applications. A first clinical trial with **rAAV** vectors has been started for cystic fibrosis. While several important issues, including safety, tissue tropism and methods to achieve site-specific integration, need further clarification, **rAAV** seems to have a sufficient number of advantages to be seriously considered as a future gene therapy vector.

L32 ANSWER 229 OF 244 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1996:87115 CAPLUS
DOCUMENT NUMBER: 124:108980
TITLE: Increasing transduction of cells by adeno-associated virus vectors by using DNA metabolism-altering agents
INVENTOR(S): Alexander, Ian E.; Russell, David W.; Miller, A. Dusty
PATENT ASSIGNEE(S): Fred Hutchinson Cancer Research Center, USA
SOURCE: PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9533824	A1	19951214	WO 1995-US7202	19950605
W: AU, CA, JP, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5604090	A	19970218	US 1994-254312	19940606
CA 2192214	AA	19951214	CA 1995-2192214	19950605
AU 9526994	A1	19960104	AU 1995-26994	19950605
EP 765387	A1	19970402	EP 1995-922237	19950605
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
US 5834182	A	19981110	US 1997-750274	19970225

PRIORITY APPLN. INFO.: US 1994-254312 19940606
WO 1995-US7202 19950605

AB Methods are provided for **increasing** the efficiency of **transduction** of cells, including non-dividing cells, by **recombinant AAV** vectors. The methods utilize agents that alter certain aspects of DNA metab., more specifically, that affect DNA synthesis and/or affect repair, that impact on maintenance of chromosomal integrity, and/or that cause damage to the cellular DNA. Agents and vectors can now also be preselected and screened for transducing ability and/or transducing agents for their effect on DNA metab. These agents include tritiated nucleotides such as thymidine, gamma irradn., UV irradn., cis-platinum, etoposide, hydroxyurea, aphidicolin, and camptothecin.

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FULL ESTIMATED COST 210.77 210.98

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)
SINCE FILE ENTRY TOTAL SESSION
CA SUBSCRIBER PRICE -4.96 -4.96

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PASSWORD:
* * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
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FILE 'MEDLINE' ENTERED AT 16:32:11 ON 16 JUN 2002
FILE 'BIOSIS' ENTERED AT 16:32:11 ON 16 JUN 2002
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FILE 'CAPLUS' ENTERED AT 16:32:11 ON 16 JUN 2002
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FULL ESTIMATED COST 210.77 210.98

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)
SINCE FILE ENTRY TOTAL SESSION
CA SUBSCRIBER PRICE -4.96 -4.96

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(FILE 'HOME' ENTERED AT 15:16:46 ON 16 JUN 2002)

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 15:17:03 ON 16 JUN 2002
E RAAV
L1 1040 S RAAV
L2 622 S RECOMBINANT AAV
L3 0 S ADENO!ASSOCIATED VIRUS
L4 5747 S ADENO-ASSOCIATED
E ADENO-ASSOCIATED
L5 56882 S PROTEASE INHIBITOR
E PROTEINASE INH
L6 30433 S PROTEINASE INHIBITOR
L7 81516 S L5 OR L6
L8 1 S L1(S)L6
L9 0 S L2(S)L6
L10 1 S L4(S)L6
L11 1 S L1 AND L6
L12 0 S L2 AND L6
L13 9 S L4 AND L6
L14 9 DUP REM L13 (0 DUPLICATES REMOVED)
L15 281838 S TRANSDUCTION
L16 324 S L7(S)L15
L17 677499 S ADENO?
L18 7 S L16 AND L17
L19 7 DUP REM L18 (0 DUPLICATES REMOVED)
L20 435 S L7(P)L15
L21 10 S L20 AND L17
L22 9 DUP REM L21 (1 DUPLICATE REMOVED)
L23 2 S L22 NOT L19
L24 454934 S (IMPROV? OR ENHANC? OR INCREAS? OR DECREAS? OR AUGMENT? OR PO
L25 1086 S L24(P)(L1 OR L2 OR L4)
L26 3 S L7 AND L25
L27 3 DUP REM L26 (0 DUPLICATES REMOVED)
L28 410 S L24(S)(L1 OR L2)
L29 1279 S RECOMBINANT ADENO-ASSOCIATED
L30 1809 S L1 OR L2 OR L29
L31 464 S L24(S)L30
L32 244 DUP REM L31 (220 DUPLICATES REMOVED)

=> s proteasom?
L33 13739 PROTEASOM?

=> s l33 and l30
L34 10 L33 AND L30

=> dup rem l34
PROCESSING COMPLETED FOR L34
L35 4 DUP REM L34 (6 DUPLICATES REMOVED)

=> d ti so 1-4

L35 ANSWER 1 OF 4 MEDLINE DUPLICATE 1
TI Ubiquitination of both adeno-associated virus type 2 and 5 capsid proteins
affects the transduction efficiency of recombinant vectors.
SO JOURNAL OF VIROLOGY, (2002 Mar) 76 (5) 2043-53.
Journal code: 0113724. ISSN: 0022-538X.

L35 ANSWER 2 OF 4 MEDLINE DUPLICATE 2
TI Intracellular trafficking of adeno-associated virus vectors: routing to the late endosomal compartment and **proteasome** degradation.
SO JOURNAL OF VIROLOGY, (2001 Feb) 75 (4) 1824-33.
Journal code: 0113724. ISSN: 0022-538X.

L35 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2002 ACS
TI Compounds and methods to enhance **recombinant adeno-associated** virus (**rAAV**) transduction for gene therapy
SO PCT Int. Appl., 127 pp.
CODEN: PIXXD2

L35 ANSWER 4 OF 4 MEDLINE DUPLICATE 3
TI Endosomal processing limits gene transfer to polarized airway epithelia by
adeno-associated virus.
SO JOURNAL OF CLINICAL INVESTIGATION, (2000 Jun) 105 (11) 1573-87.
Journal code: 7802877. ISSN: 0021-9738.

=> s ubiqutin?
L36 24 UBIQUTIN?

=> s ubiquitin?
L37 22463 UBIQUITIN?

=> s l37 and l30
L38 7 L37 AND L30

=> dup rem l38
PROCESSING COMPLETED FOR L38
L39 3 DUP REM L38 (4 DUPLICATES REMOVED)

=> d ti so 1-3

L39 ANSWER 1 OF 3 MEDLINE DUPLICATE 1
TI **Ubiquitination** of both adeno-associated virus type 2 and 5 capsid proteins affects the transduction efficiency of recombinant vectors.
SO JOURNAL OF VIROLOGY, (2002 Mar) 76 (5) 2043-53.
Journal code: 0113724. ISSN: 0022-538X.

L39 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS
TI Compounds and methods to enhance **recombinant adeno-associated** virus (**rAAV**) transduction for gene therapy
SO PCT Int. Appl., 127 pp.
CODEN: PIXXD2

L39 ANSWER 3 OF 3 MEDLINE DUPLICATE 2
TI Endosomal processing limits gene transfer to polarized airway epithelia by
adeno-associated virus.
SO JOURNAL OF CLINICAL INVESTIGATION, (2000 Jun) 105 (11) 1573-87.
Journal code: 7802877. ISSN: 0021-9738.

=> s adenovir?
L40 69449 ADENOVIR?

=> s l37 or l33
L41 30691 L37 OR L33

=> s l40 and l41
L42 237 L40 AND L41

=> s l40(s)l41
L43 145 L40(S) L41

=> dup rem l43
PROCESSING COMPLETED FOR L43
L44 75 DUP REM L43 (70 DUPLICATES REMOVED)

=> d ti so 1-75

L44 ANSWER 1 OF 75 MEDLINE DUPLICATE 1
TI Deubiquitinating function of adenovirus proteinase.
SO JOURNAL OF VIROLOGY, (2002 Jun) 76 (12) 6323-31.
Journal code: 0113724. ISSN: 0022-538X.

L44 ANSWER 2 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Human p14ARF-mediated cell cycle arrest strictly depends on intact p53
signaling pathways.
SO Oncogene, (9 May, 2002) Vol. 21, No. 20, pp. 3207-3212.
http://www.nature.com/onc. print.
ISSN: 0950-9232.

L44 ANSWER 3 OF 75 MEDLINE DUPLICATE 2
TI Notch signaling induces rapid degradation of achaete-scute homolog 1.
SO MOLECULAR AND CELLULAR BIOLOGY, (2002 May) 22 (9) 3129-39.
Journal code: 8109087. ISSN: 0270-7306.

L44 ANSWER 4 OF 75 MEDLINE DUPLICATE 3
TI Carboxyl-terminal transactivation activity of hypoxia-inducible factor 1
alpha is governed by a von Hippel-Lindau protein-independent, hydroxylation-regulated association with p300/CBP.
SO MOLECULAR AND CELLULAR BIOLOGY, (2002 May) 22 (9) 2984-92.
Journal code: 8109087. ISSN: 0270-7306.

L44 ANSWER 5 OF 75 MEDLINE DUPLICATE 4
TI Expression of herpes simplex virus ICP0 inhibits the induction of interferon-stimulated genes by viral infection.
SO JOURNAL OF VIROLOGY, (2002 Mar) 76 (5) 2180-91.
Journal code: 0113724. ISSN: 0022-538X.

L44 ANSWER 6 OF 75 MEDLINE
TI Improved Treatment of Pancreatic Cancer by IL-12 and B7.1 Costimulation:
Antitumor Efficacy and Immunoregulation in a Nonimmunogenic Tumor Model.
SO MOLECULAR THERAPY, (2002 Apr) 5 (4) 405-12.
Journal code: 100890581. ISSN: 1525-0016.

L44 ANSWER 7 OF 75 MEDLINE
TI The production of a new MAGE-3 peptide presented to cytolytic T lymphocytes by HLA-B40 requires the immunoproteasome.
SO JOURNAL OF EXPERIMENTAL MEDICINE, (2002 Feb 18) 195 (4) 391-9.
Journal code: 2985109R. ISSN: 0022-1007.

L44 ANSWER 8 OF 75 CAPLUS COPYRIGHT 2002 ACS
TI A proteasome-resistant variant of the tumor suppressor p14 (ARF) and a
gene encoding it for cancer gene therapy
SO PCT Int. Appl., 26 pp.
CODEN: PIXXD2

L44 ANSWER 9 OF 75 MEDLINE DUPLICATE 5
TI Mdm2 mutant defective in binding p300 promotes ubiquitination but not
degradation of p53: evidence for the role of p300 in integrating ubiquitination and proteolysis.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (2001 Aug 10) 276 (32) 29695-701.
Journal code: 2985121R. ISSN: 0021-9258.

L44 ANSWER 10 OF 75 MEDLINE DUPLICATE 6
TI SUMO-1 modification required for transformation by adenovirus type 5 early
region 1B 55-kDa oncoprotein.
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF

SCIENCES OF THE UNITED STATES OF
AMERICA, (2001 Sep 25) 98 (20) 11312-7.
Journal code: 7505876. ISSN: 0027-8424.

L44 ANSWER 11 OF 75 MEDLINE DUPLICATE 7
TI An adenovirus expressing mutant p27 showed more potent antitumor effects
than adenovirus-p27 wild type.
SO CANCER RESEARCH, (2001 Aug 15) 61 (16) 6163-9.
Journal code: 2984705R. ISSN: 0008-5472.

L44 ANSWER 12 OF 75 MEDLINE DUPLICATE 8
TI Evaluation of interactions of human cytomegalovirus immediate-early IE2
regulatory protein with small ubiquitin-like modifiers and their conjugation enzyme Ubc9.
SO JOURNAL OF VIROLOGY, (2001 Apr) 75 (8) 3859-72.
Journal code: 0113724. ISSN: 0022-538X.

L44 ANSWER 13 OF 75 MEDLINE DUPLICATE 9
TI Degradation of p53 by adenovirus E4orf6 and E1B55K proteins occurs via a
novel mechanism involving a Cullin-containing complex.
SO GENES AND DEVELOPMENT, (2001 Dec 1) 15 (23) 3104-17.
Journal code: 8711660. ISSN: 0890-9369.

L44 ANSWER 14 OF 75 MEDLINE DUPLICATE 10
TI Role of NFkappaB in antigen presentation and development of regulatory T
cells elucidated by treatment of dendritic cells with the proteasome inhibitor PSI.
SO EUROPEAN JOURNAL OF IMMUNOLOGY, (2001 Jun) 31 (6) 1883-93.
Journal code: 1273201. ISSN: 0014-2980.

L44 ANSWER 15 OF 75 MEDLINE DUPLICATE 11
TI Intracellular trafficking of adeno-associated virus vectors: routing to the late endosomal compartment and proteasome degradation.
SO JOURNAL OF VIROLOGY, (2001 Feb) 75 (4) 1824-33.
Journal code: 0113724. ISSN: 0022-538X.

L44 ANSWER 16 OF 75 CAPLUS COPYRIGHT 2002 ACS
TI Increased persistence of lung gene expression using plasmids containing
the ubiquitin C or elongation factor 1.alpha. promoter
SO Gene Therapy (2001), 8(20), 1539-1546
CODEN: GETHEC; ISSN: 0969-7128

L44 ANSWER 17 OF 75 MEDLINE DUPLICATE 12
TI Effect of NF-kappa B Inhibition on TNF-alpha-induced apoptosis and
downstream pathways in cardiomyocytes.
SO JOURNAL OF MOLECULAR AND CELLULAR CARDIOLOGY, (2001 Jun) 33 (6) 1223-32.
Journal code: 0262322. ISSN: 0022-2828.

L44 ANSWER 18 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Mutant ubiquitin expressed in Alzheimer's disease causes neuronal death.
SO Society for Neuroscience Abstracts, (2001) Vol. 27, No. 1, pp. 1143.
print.
Meeting Info.: 31st Annual Meeting of the Society for Neuroscience San
Diego, California, USA November 10-15, 2001
ISSN: 0190-5295.

L44 ANSWER 19 OF 75 MEDLINE
TI [Monoclonal antibodies against protein Daxx and its localization in nuclear domains 10].
Monoklonal'nye antitela k belku Daxx i ego lokalizatsiia v iadernykh domenakh 10.
SO TSITOLOGIIA, (2001) 43 (12) 1123-9.
Journal code: 0417363. ISSN: 0041-3771.

L44 ANSWER 20 OF 75 MEDLINE DUPLICATE 13
TI Evolutionary lines of cysteine peptidases.
SO BIOLOGICAL CHEMISTRY, (2001 May) 382 (5) 727-33. Ref: 25
Journal code: 9700112. ISSN: 1431-6730.

L44 ANSWER 21 OF 75 MEDLINE DUPLICATE 14
TI Identification of three functions of the adenovirus e4orf6 protein that
mediate p53 degradation by the E4orf6-E1B55K complex.
SO JOURNAL OF VIROLOGY, (2001 Jan) 75 (2) 699-709.
Journal code: 0113724. ISSN: 0022-538X.

L44 ANSWER 22 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI **Adenoviral** E1A protein interacts with the non-ATPase of 26S **proteasomal** subunit S2 and this is correlated to the E1A's ability to sensitize cells to TNFalpha-induced apoptosis.
SO Oncology Research, (2001) Vol. 12, No. 6-7, pp. 298. print.
Meeting Info.: 2001 Millennium International Conference of Molecular and
Tumor Biology Santorini, Greece September 02-07, 2001
ISSN: 0965-0407.

L44 ANSWER 23 OF 75 MEDLINE DUPLICATE 15
TI Analysis of expression of nuclear factor kappa B (NF-kappa B) in multiple
myeloma: downregulation of NF-kappa B induces apoptosis.
SO BRITISH JOURNAL OF HAEMATOLOGY, (2001 Nov) 115 (2) 279-86.
Journal code: 0372544. ISSN: 0007-1048.

L44 ANSWER 24 OF 75 MEDLINE DUPLICATE 16
TI Enhancement of radiosensitivity by proteasome inhibition: implications for
a role of NF-kappaB.
SO INTERNATIONAL JOURNAL OF RADIATION ONCOLOGY, BIOLOGY, PHYSICS, (2001 May
1) 50 (1) 183-93.
Journal code: 7603616. ISSN: 0360-3016.

L44 ANSWER 25 OF 75 MEDLINE DUPLICATE 17
TI HBV X protein targets HIV Tat-binding protein 1.
SO VIROLOGY, (2001 Apr 25) 283 (1) 110-20.
Journal code: 0110674. ISSN: 0042-6822.

L44 ANSWER 26 OF 75 MEDLINE DUPLICATE 18
TI Promotion of S-phase entry and cell growth under serum starvation by
SAG/ROC2/Rbx2/Hrt2, an E3 ubiquitin ligase component: association with
inhibition of p27 accumulation.
SO MOLECULAR CARCINOGENESIS, (2001 Jan) 30 (1) 37-46.
Journal code: 8811105. ISSN: 0899-1987.

L44 ANSWER 27 OF 75 MEDLINE
TI Novel biologically based therapies for myeloma.
SO CANCER JOURNAL, (2001 Jul-Aug) 7 Suppl 1 S19-23. Ref: 31
Journal code: 100931981. ISSN: 1528-9117.

L44 ANSWER 28 OF 75 CAPLUS COPYRIGHT 2002 ACS
TI Polynucleotides (cDNA) and polypeptides of human ubiquitin conjugating
enzyme (E2)-associated protein Ring C1, sequences, and biol. and therapeutic uses thereof
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2

L44 ANSWER 29 OF 75 MEDLINE DUPLICATE 19
TI The mitochondrial permeability transition augments Fas-induced apoptosis
in mouse hepatocytes.

SO JOURNAL OF BIOLOGICAL CHEMISTRY, (2000 Apr 21) 275 (16) 11814-23.
Journal code: 2985121R. ISSN: 0021-9258.

L44 ANSWER 30 OF 75 MEDLINE DUPLICATE 20
TI Recombinant adenovirus induces maturation of dendritic cells via an NF-kappaB-dependent pathway.
SO JOURNAL OF VIROLOGY, (2000 Oct) 74 (20) 9617-28.
Journal code: 0113724. ISSN: 0022-538X.

L44 ANSWER 31 OF 75 MEDLINE DUPLICATE 21
TI Transcriptional regulation of the major histocompatibility complex (MHC)
class I heavy chain, TAP1 and LMP2 genes by the human papillomavirus (HPV)
type 6b, 16 and 18 E7 oncoproteins.
SO ONCOGENE, (2000 Oct 5) 19 (42) 4930-5.
Journal code: 8711562. ISSN: 0950-9232.

L44 ANSWER 32 OF 75 MEDLINE DUPLICATE 22
TI Regulation of the 26S **proteasome** by **adenovirus** E1A.
SO EMBO JOURNAL, (2000 Sep 1) 19 (17) 4759-73.
Journal code: 8208664. ISSN: 0261-4189.

L44 ANSWER 33 OF 75 MEDLINE
TI MHC class I antigen processing of an adenovirus CTL epitope is linked to
the levels of immunoproteasomes in infected cells.
SO JOURNAL OF IMMUNOLOGY, (2000 May 1) 164 (9) 4500-6.
Journal code: 2985117R. ISSN: 0022-1767.

L44 ANSWER 34 OF 75 MEDLINE DUPLICATE 23
TI A rapamycin-sensitive pathway down-regulates insulin signaling via phosphorylation and proteasomal degradation of insulin receptor substrate-1.
SO MOLECULAR ENDOCRINOLOGY, (2000 Jun) 14 (6) 783-94.
Journal code: 8801431. ISSN: 0888-8809.

L44 ANSWER 35 OF 75 MEDLINE DUPLICATE 24
TI Protein kinase C-alpha is an upstream activator of the IkappaB kinase
complex in the TPA signal transduction pathway to NF-kappaB in U2OS cells.
SO CELLULAR SIGNALLING, (2000 Dec) 12 (11-12) 759-68.
Journal code: 8904683. ISSN: 0898-6568.

L44 ANSWER 36 OF 75 MEDLINE DUPLICATE 25
TI Consequences of disruption of the interaction between p53 and the larger
adenovirus early region 1B protein in adenovirus E1 transformed human
cells.
SO ONCOGENE, (2000 Jan 20) 19 (3) 452-62.
Journal code: 8711562. ISSN: 0950-9232.

L44 ANSWER 37 OF 75 MEDLINE DUPLICATE 26
TI Nitric oxide prevents p21 degradation with the ubiquitin-proteasome pathway in vascular smooth muscle cells.
SO JOURNAL OF VASCULAR SURGERY, (2000 Feb) 31 (2) 364-74.
Journal code: 8407742. ISSN: 0741-5214.

L44 ANSWER 38 OF 75 MEDLINE DUPLICATE 27
TI Bcl-2 intersects the NFkappaB signalling pathway and suppresses apoptosis
in ventricular myocytes.
SO CLINICAL AND INVESTIGATIVE MEDICINE. MEDECINE CLINIQUE ET EXPERIMENTALE,
(2000 Oct) 23 (5) 322-30.
Journal code: 7804071. ISSN: 0147-958X.

L44 ANSWER 39 OF 75 MEDLINE DUPLICATE 28
TI NF-kappaB activation is related to the resistance of lung cancer cells to
TNF-alpha-induced apoptosis.
SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (2000 Jun 24) 273 (1)
140-6.
Journal code: 0372516. ISSN: 0006-291X.

L44 ANSWER 40 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI The **proteasome** inhibitor PI31 affects antigen processing and is induced by **adenovirus** infection.
SO Immunobiology, (November, 2000) Vol. 203, No. 1-2, pp. 57-58. print.
Meeting Info.: Joint Annual Meeting of the German and Dutch Societies of
Immunology Duseldorf, Germany November 29-December 02, 2000
ISSN: 0171-2985.

L44 ANSWER 41 OF 75 CAPLUS COPYRIGHT 2002 ACS
TI Peptides of frameshift mutants of .beta.-amyloid precursor protein and
ubiquitin-B and their therapeutic use in Alzheimer's disease and Down's
syndrome
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2

L44 ANSWER 42 OF 75 MEDLINE DUPLICATE 29
TI Mechanisms of hypoxia-induced endothelial cell death. Role of p53 in
apoptosis.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1999 Mar 19) 274 (12) 8039-45.
Journal code: 2985121R. ISSN: 0021-9258.

L44 ANSWER 43 OF 75 MEDLINE DUPLICATE 30
TI Adenovirus-mediated overexpression of microsomal triglyceride transfer
protein (MTP): mechanistic studies on the role of MTP in apolipoprotein
B-100 biogenesis.
SO BIOCHEMISTRY, (1999 Jun 8) 38 (23) 7532-44.
Journal code: 0370623. ISSN: 0006-2960.

L44 ANSWER 44 OF 75 MEDLINE DUPLICATE 31
TI Viral immediate-early proteins abrogate the modification by SUMO-1 of PML
and Sp100 proteins, correlating with nuclear body disruption.
SO JOURNAL OF VIROLOGY, (1999 Jun) 73 (6) 5137-43.
Journal code: 0113724. ISSN: 0022-538X.

L44 ANSWER 45 OF 75 MEDLINE DUPLICATE 32
TI Cell cycle regulation of PML modification and ND10 composition.
SO JOURNAL OF CELL SCIENCE, (1999 Dec) 112 (Pt 24) 4581-8.
Journal code: 0052457. ISSN: 0021-9533.

L44 ANSWER 46 OF 75 MEDLINE DUPLICATE 33
TI Promoter specificity and stability control of the p53-related protein p73.
SO ONCOGENE, (1999 Jul 22) 18 (29) 4171-81.
Journal code: 8711562. ISSN: 0950-9232.

L44 ANSWER 47 OF 75 MEDLINE DUPLICATE 34
TI The adenovirus type 5 E1b 55K and E4 Orf3 proteins associate in infected
cells and affect ND10 components.
SO JOURNAL OF GENERAL VIROLOGY, (1999 Apr) 80 (Pt 4) 997-1008.
Journal code: 0077340. ISSN: 0022-1317.

L44 ANSWER 48 OF 75 MEDLINE DUPLICATE 35
TI Nuclear factor-kappa B regulates induction of apoptosis and inhibitor of
apoptosis protein-1 expression in vascular smooth muscle cells.
SO CIRCULATION RESEARCH, (1999 Apr 2) 84 (6) 668-77.

Journal code: 0047103. ISSN: 0009-7330.

L44 ANSWER 49 OF 75 MEDLINE DUPLICATE 36
TI **Adenovirus** early region 1A protein binds to mammalian SUG1-a regulatory component of the **proteasome**.
SO ONCOGENE, (1999 Jan 14) 18 (2) 449-58.
Journal code: 8711562. ISSN: 0950-9232.

L44 ANSWER 50 OF 75 MEDLINE DUPLICATE 37
TI Regulation and deregulation of E2F1 in postmitotic neurons differentiated
from embryonal carcinoma P19 cells.
SO EXPERIMENTAL CELL RESEARCH, (1999 Sep 15) 251 (2) 442-51.
Journal code: 0373226. ISSN: 0014-4827.

L44 ANSWER 51 OF 75 MEDLINE DUPLICATE 38
TI Isolation and partial characterization of an antiviral, RC-183, from the
edible mushroom Rozites caperata.
SO ANTIVIRAL RESEARCH, (1999 Sep) 43 (2) 67-78.
Journal code: 8109699. ISSN: 0166-3542.

L44 ANSWER 52 OF 75 CAPLUS COPYRIGHT 2002 ACS
TI Expression vectors with ubiquitin promoter and methods for in vivo expression of therapeutic polypeptides
SO PCT Int. Appl., 29 pp.
CODEN: PIXXD2

L44 ANSWER 53 OF 75 CAPLUS COPYRIGHT 2002 ACS
TI Antiviral Rozites caperata mushroom extracts containing a dodecapeptide
covalently linked to ubiquitin
SO U.S., 10 pp.
CODEN: USXXAM

L44 ANSWER 54 OF 75 MEDLINE DUPLICATE 39
TI Bcl-2 activates the transcription factor NFkappaB through the degradation
of the cytoplasmic inhibitor IkappaBalpha.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1998 Sep 11) 273 (37) 23946-51.
Journal code: 2985121R. ISSN: 0021-9258.

L44 ANSWER 55 OF 75 MEDLINE DUPLICATE 40
TI Stabilization of p53 by **adenovirus** E1A occurs through its amino-terminal region by modification of the **ubiquitin-proteasome** pathway.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1998 Aug 7) 273 (32) 20036-45.
Journal code: 2985121R. ISSN: 0021-9258.

L44 ANSWER 56 OF 75 MEDLINE DUPLICATE 41
TI NF-kappaB activation provides the potential link between inflammation and
hyperplasia in the arthritic joint.
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF
AMERICA, (1998 Nov 10) 95 (23) 13859-64.
Journal code: 7505876. ISSN: 0027-8424.

L44 ANSWER 57 OF 75 MEDLINE DUPLICATE 42
TI Inhibition of NFkappaB in activated rat hepatic stellate cells by proteasome inhibitors and an IkappaB super-repressor.
SO HEPATOLOGY, (1998 May) 27 (5) 1285-95.
Journal code: 8302946. ISSN: 0270-9139.

L44 ANSWER 58 OF 75 MEDLINE DUPLICATE 43
TI Role of NF-kappaB in immune and inflammatory responses in the gut.
SO GUT, (1998 Dec) 43 (6) 856-60. Ref: 76
Journal code: 2985108R. ISSN: 0017-5749.

L44 ANSWER 59 OF 75 MEDLINE
TI Nuclear domain 10, the site of DNA virus transcription and replication.
SO BIOESSAYS, (1998 Aug) 20 (8) 660-7. Ref: 63
Journal code: 8510851. ISSN: 0265-9247.

L44 ANSWER 60 OF 75 CAPLUS COPYRIGHT 2002 ACS
TI Human adenoviruses: evading detection by cytotoxic T lymphocytes
SO Seminars in Virology (1998), 8(5), 387-397
CODEN: SEVIEL; ISSN: 1044-5773

L44 ANSWER 61 OF 75 MEDLINE DUPLICATE 44
TI Reduced thermotolerance in aged cells results from a loss of an hsp72-mediated control of JNK signaling pathway.
SO CELL STRESS AND CHAPERONES, (1998 Dec) 3 (4) 265-71.
Journal code: 9610925. ISSN: 1355-8145.

L44 ANSWER 62 OF 75 MEDLINE DUPLICATE 45
TI p73beta, unlike p53, suppresses growth and induces apoptosis of human
papillomavirus E6-expressing cancer cells.
SO INTERNATIONAL JOURNAL OF ONCOLOGY, (1998 Jul) 13 (1) 5-9.
Journal code: 9306042. ISSN: 1019-6439.

L44 ANSWER 63 OF 75 MEDLINE DUPLICATE 46
TI Differential regulation of the pocket domains of the retinoblastoma family
proteins by the HPV16 E7 oncoprotein.
SO CELL GROWTH AND DIFFERENTIATION, (1997 Dec) 8 (12) 1277-86.
Journal code: 9100024. ISSN: 1044-9523.

L44 ANSWER 64 OF 75 MEDLINE DUPLICATE 47
TI Induction of **ubiquitin** conjugating enzyme activity for degradation of topoisomerase II alpha during **adenovirus** E1A-induced apoptosis.
SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (1997 Oct 29) 239 (3)
823-9.
Journal code: 0372516. ISSN: 0006-291X.

L44 ANSWER 65 OF 75 MEDLINE DUPLICATE 48
TI mUBC9, a novel adenovirus E1A-interacting protein that complements a yeast
cell cycle defect.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1996 Oct 18) 271 (42) 25906-11.
Journal code: 2985121R. ISSN: 0021-9258.

L44 ANSWER 66 OF 75 MEDLINE DUPLICATE 49
TI Degradation of topoisomerase IIalpha during **adenovirus** E1A-induced apoptosis is mediated by the activation of the **ubiquitin** proteolysis system.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1996 Oct 4) 271 (40) 24842-9.
Journal code: 2985121R. ISSN: 0021-9258.

L44 ANSWER 67 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Degradation of E2F by the **ubiquitin-proteasome** pathway: Regulation by retinoblastoma family proteins and **adenovirus** transforming proteins.
SO Genes & Development, (1996) Vol. 10, No. 23, pp. 2961-2970.
ISSN: 0890-9369.

L44 ANSWER 68 OF 75 MEDLINE DUPLICATE 50
TI Degradation of E2F by the **ubiquitin-proteasome** pathway: regulation by retinoblastoma family proteins and **adenovirus** transforming proteins.
SO GENES AND DEVELOPMENT, (1996 Dec 1) 10 (23) 2960-70.
Journal code: 8711660. ISSN: 0890-9369.

L44 ANSWER 69 OF 75 MEDLINE DUPLICATE 51
TI The SV40 large T antigen and adenovirus E1a oncoproteins interact

with
distinct isoforms of the transcriptional co-activator, p300.
SO EMBO JOURNAL, (1996 May 1) 15 (9) 2236-48.
Journal code: 8208664. ISSN: 0261-4189.

L44 ANSWER 70 OF 75 MEDLINE
TI Degradation of topoisomerase II alpha precedes nuclei degeneration during
adenovirus E1A-induced apoptosis and is mediated by the activation of the **ubiquitin** dependent proteolysis system.
SO NIPPON RINSHO. JAPANESE JOURNAL OF CLINICAL MEDICINE, (1996 Jul) 54 (7)
1828-35. Ref: 10
Journal code: 0420546. ISSN: 0047-1852.

L44 ANSWER 71 OF 75 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Degradation of topoisomerase II-alpha during **adenovirus** E1A-induced apoptosis is mediated by the activation of the **ubiquitin** proteolysis system.
SO Biochemical Society Transactions, (1996) Vol. 24, No. 4, pp. 565S.
Meeting Info.: 4th International Union of Biochemistry and Molecular
Biology Conference Edinburgh, Scotland, UK July 14-17, 1996
ISSN: 0300-5127.

L44 ANSWER 72 OF 75 MEDLINE DUPLICATE 52
TI LMP-associated proteolytic activities and TAP-dependent peptide transport
for class I MHC molecules are suppressed in cell lines transformed by the
highly oncogenic adenovirus 12.
SO JOURNAL OF EXPERIMENTAL MEDICINE, (1996 Feb 1) 183 (2) 499-514.
Journal code: 2985109R. ISSN: 0022-1007.

L44 ANSWER 73 OF 75 MEDLINE DUPLICATE 53
TI Adenovirus E1A-induced apoptosis elicits a steep decrease in the topoisomerase II alpha level during the latent phase.
SO ONCOGENE, (1995 Feb 16) 10 (4) 651-62.
Journal code: 8711562. ISSN: 0950-9232.

L44 ANSWER 74 OF 75 MEDLINE
TI Cellular targets of the oncoproteins encoded by the cancer associated
human papillomaviruses.
SO PRINCESS TAKAMATSU SYMPOSIA, (1991) 22 239-48. Ref: 56
Journal code: 9301172.

L44 ANSWER 75 OF 75 MEDLINE DUPLICATE 54
TI Gly-Gly-X, a novel consensus sequence for the proteolytic processing of
viral and cellular proteins.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1989 Jun 5) 264 (16) 9107-10.
Journal code: 2985121R. ISSN: 0021-9258.

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L5 56882 S PROTEASE INHIBITOR
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L6 30433 S PROTEINASE INHIBITOR
L7 81516 S L5 OR L6
L8 1 S L1(S)L6
L9 0 S L2(S)L6
L10 1 S L4(S)L6
L11 1 S L1 AND L6
L12 0 S L2 AND L6
L13 9 S L4 AND L6
L14 9 DUP REM L13 (0 DUPLICATES REMOVED)
L15 281838 S TRANSDUCTION
L16 324 S L7(S)L15
L17 677499 S ADENO?
L18 7 S L16 AND L17
L19 7 DUP REM L18 (0 DUPLICATES REMOVED)
L20 435 S L7(P)L15
L21 10 S L20 AND L17
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L23 2 S L22 NOT L19
L24 454934 S (IMPROV? OR ENHANC? OR INCREAS? OR DECREAS? OR AUGMENT? OR PO
L25 1086 S L24(P)(L1 OR L2 OR L4)
L26 3 S L7 AND L25
L27 3 DUP REM L26 (0 DUPLICATES REMOVED)
L28 410 S L24(S)(L1 OR L2)
L29 1279 S RECOMBINANT ADENO-ASSOCIATED
L30 1809 S L1 OR L2 OR L29
L31 464 S L24(S)L30
L32 244 DUP REM L31 (220 DUPLICATES REMOVED)
L33 13739 S PROTEASOM?
L34 10 S L33 AND L30
L35 4 DUP REM L34 (6 DUPLICATES REMOVED)
L36 24 S UBIQUTIN?
L37 22463 S UBIQUITIN?
L38 7 S L37 AND L30
L39 3 DUP REM L38 (4 DUPLICATES REMOVED)
L40 69449 S ADENOVIR?
L41 30691 S L37 OR L33
L42 237 S L40 AND L41
L43 145 S L40(S)L41
L44 75 DUP REM L43 (70 DUPLICATES REMOVED)

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NEWS 7 Mar 22 TOXLIT no longer available
NEWS 8 Mar 22 TRCTHERMO no longer available
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E1 1 N-CARBOBENZOXYISONIPECOTIC ACID/CN
E2 1 N-CARBOBENZOXYL-L-DOPA/CN
E3 0 --> N-CARBOBENZOXYL-L-LEUCINYL-L-LEUCINYL-L-NORVALINAL/CN
E4 1 N-CARBOBENZOXYLEUCINE-P-NITROPHENYL ESTER/CN
E5 1 N-CARBOBENZOXYNORVALINE P-NITROPHENYL ESTER/CN
E6 1 N-CARBOBENZOXYPROLINE/CN
E7 1 N-CARBOBENZOXYPROLYLLEUCINE/CN
E8 1 N-CARBOBENZOXYPROLYLLEUCYLGLYCYLGLYCINE AMIDE/CN
E9 1 N-CARBOBENZOXYPYROGLUTAMIC ACID/CN
E10 1 N-CARBOBENZOXYSARCOSINE/CN
E11 1 N-CARBOBENZOXYTYROSINE/CN
E12 1 N-CARBOBENZOXYVALINE/CN
E13 1 N-CARBOBENZOXYVALINE P-NITROPHENYL ESTER/CN
E14 1 N-CARBOBENZOYL-L-TRYPTOPHYLGLYCYLGLYCINE/CN
E15 1 N-CARBOBENZYLOXY-.ALPHA.-BENZYL-.GAMMA.-(P-NITROPHENYL)-L-GLUTAMATE/CN
E16 1 N-CARBOBENZYLOXY-.BETA.-ALANINE/CN
E17 1 N-CARBOBENZYLOXY-.GAMMA.-AMINOBUTYRIC ACID/CN
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E19 1 N-CARBOBENZYLOXY-.GAMMA.-METHYL-L-GLUTAMATE-.ALPHA.-PENTACHLOROPHENYL ESTER/CN
E20 1 N-CARBOBENZYLOXY-1,3-DIAMINOPROPANE HYDROCHLORIDE/CN
E21 1 N-CARBOBENZYLOXY-3,5-DIIODOTYROSINE/CN
E22 1 N-CARBOBENZYLOXY-4-BENZYLDOPAMINE/CN
E23 1 N-CARBOBENZYLOXY-4-PIPERIDONE/CN
E24 1 N-CARBOBENZYLOXY-D-ALANINE/CN
E25 1 N-CARBOBENZYLOXY-D-CYCLOSERINE/CN

=> E "Z-LLL"/CN 25
E1 1 Z-LIGHT SPHERES W 1300/CN
E2 1 Z-LIGHT SPHERES W 1800/CN
E3 0 --> Z-LLL/CN
E4 1 Z-LYCOPENE/CN
E5 1 Z-LYS(BOC)-GLY-PHE-PHE-OME/CN
E6 1 Z-LYS(BOC)-NME2/CN
E7 1 Z-LYS(BOC)-OH/CN
E8 1 Z-LYS(Z)-LYS(Z)-LYS(Z)-LEU-ARG(NO2)-GLY-ARG(NO2)-PRO-PRO-OBZL/CN
E9 1 Z-MAX MA/CN
E10 1 Z-METHYL 2-AMINO-5-(2,4-DIFLUOROPHENYL)-5-(4,4'-BIPHENYL)-4-PENTENOATE/CN
E11 1 Z-METHYL 2-AMINO-5-(2,4-DIFLUOROPHENYL)-5-(4-ISOPROPYLPHENYL)-4-PENTENOATE/CN
E12 1 Z-METHYL 3-HEXENOATE/CN
E13 1 Z-METHYL O-METHYLMULTICOLANATE/CN
E14 1 Z-METHYL PROP-1-ENYL ETHER/CN

E15 1 Z-METHYL STYRYL SULFOXIDE/CN
E16 1 Z-N,N-DIETHYL-9-OCTADECENAMIDE/CN
E17 1 Z-N,N-DIMETHYL-P-METHOXYTHIOCINNAMAMIDE/CN
E18 1 Z-N,N-DIMETHYL-P-TRIFLUOROMETHYLTHIOCINNAMAMIDE/CN
E19 1 Z-N,N-DIMETHYLTHIOCINNAMAMIDE/CN
E20 1 Z-N-FERULOYLTYRAMINE/CN
E21 1 Z-NOUVE/CN
E22 1 Z-O-BENZYL-TYROSINE-ISOLEUCINE-GLUTAMINE-ASPARAGINE-S-BENZYL-CYSTEINE-PROLINE-LEUCINE-GLYCINE-NH2/CN
E23 1 Z-O-METHYLBENZOHYDROXIMOYL CYANIDE/CN
E24 1 Z-O-TERT-BUTYL-TYR-.BETA.-TERT-BUTYL-ASP-ALA-GLY METHYL ESTER/CN
E25 1 Z-O-TERT-BUTYL-TYR-.BETA.-TERT-BUTYL-ASP-ALA-GLY PENTACHLOROPHENYL ESTER/CN

=> E "N-CARBOBENZOXYL-L-LEUCINYL-L-LEUCINYL-L-NORVALINAL"/CN 25
E1 1 N-CARBOBENZOXYISONIPECOTIC ACID/CN
E2 1 N-CARBOBENZOXYL-L-DOPA/CN
E3 0 --> N-CARBOBENZOXYL-L-LEUCINYL-L-LEUCINYL-L-NORVALINAL/CN
E4 1 N-CARBOBENZOXYLEUCINE-P-NITROPHENYL ESTER/CN
E5 1 N-CARBOBENZOXYNORVALINE P-NITROPHENYL ESTER/CN
E6 1 N-CARBOBENZOXYPROLINE/CN
E7 1 N-CARBOBENZOXYPROLYLLEUCINE/CN
E8 1 N-CARBOBENZOXYPROLYLLEUCYLGLYCYLGLYCINE AMIDE/CN
E9 1 N-CARBOBENZOXYPYROGLUTAMIC ACID/CN
E10 1 N-CARBOBENZOXYSARCOSINE/CN
E11 1 N-CARBOBENZOXYTYROSINE/CN
E12 1 N-CARBOBENZOXYVALINE/CN
E13 1 N-CARBOBENZOXYVALINE P-NITROPHENYL ESTER/CN
E14 1 N-CARBOBENZOYL-L-TRYPTOPHYLGLYCYLGLYCINE/CN
E15 1 N-CARBOBENZYLOXY-.ALPHA.-BENZYL-.GAMMA.-(P-NITROPHENYL)-L-GLUTAMATE/CN
E16 1 N-CARBOBENZYLOXY-.BETA.-ALANINE/CN
E17 1 N-CARBOBENZYLOXY-.GAMMA.-AMINOBUTYRIC ACID/CN
E18 1 N-CARBOBENZYLOXY-.GAMMA.-METHYL-L-GLUTAMATE/CN
E19 1 N-CARBOBENZYLOXY-.GAMMA.-METHYL-L-GLUTAMATE-.ALPHA.-PENTACHLOROPHENYL ESTER/CN
E20 1 N-CARBOBENZYLOXY-1,3-DIAMINOPROPANE HYDROCHLORIDE/CN
E21 1 N-CARBOBENZYLOXY-3,5-DIIODOTYROSINE/CN
E22 1 N-CARBOBENZYLOXY-4-BENZYLDOPAMINE/CN
E23 1 N-CARBOBENZYLOXY-4-PIPERIDONE/CN
E24 1 N-CARBOBENZYLOXY-D-ALANINE/CN
E25 1 N-CARBOBENZYLOXY-D-CYCLOSERINE/CN

=> E 25
E26 1 N-CARBOBENZYLOXY-D-GLUCOSAMINE/CN
E27 1 N-CARBOBENZYLOXY-D-LEUCINE/CN
E28 1 N-CARBOBENZYLOXY-D-METHIONINE/CN
E29 1 N-CARBOBENZYLOXY-D-NORVALINE/CN
E30 1 N-CARBOBENZYLOXY-D-PHENYLALANINE/CN
E31 1 N-CARBOBENZYLOXY-D-PHENYLGLYCINE/CN
E32 1 N-CARBOBENZYLOXY-D-PROLINE/CN
E33 1 N-CARBOBENZYLOXY-D-SERINE/CN
E34 1 N-CARBOBENZYLOXY-D-TRYPTOPHAN/CN
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E36 1 N-CARBOBENZYLOXY-D-VALINE/CN
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E39 1 N-CARBOBENZYLOXY-DL-NORVALINE/CN
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E41 1 N-CARBOBENZYLOXY-DL-TRYPTOPHAN/CN
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E43 1 N-CARBOBENZYLOXY-L-ALANINE/CN
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E45 1 N-CARBOBENZYLOXY-L-ARGININE HYDROBROMIDE/CN
E46 1 N-CARBOBENZYLOXY-L-GLUTAMIC ACID .GAMMA.-BENZYL ESTER/CN
E47 1 N-CARBOBENZYLOXY-L-HISTIDYL-L-PHENYLALANINE/CN
E48 1 N-CARBOBENZYLOXY-L-ISOLEUCINE/CN
E49 1 N-CARBOBENZYLOXY-L-ISOLEUCYL-L-PHENYLALANINE/CN
E50 1 N-CARBOBENZYLOXY-L-LEUCINE/CN

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L1 20 Z-LLL

=> dup rem l1
PROCESSING COMPLETED FOR L1
L2 8 DUP REM L1 (12 DUPLICATES REMOVED)

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L2 ANSWER 1 OF 8 MEDLINE DUPLICATE 1
TI Activation of the MEK/MAPK pathway is involved in bryostatin1-induced
monocytic differenciation and up-regulation of X-linked inhibitor of

apoptosis protein.
SO EXPERIMENTAL CELL RESEARCH, (2002 Jan 15) 272 (2) 192-8.
Journal code: 0373226. ISSN: 0014-4827.

L2 ANSWER 2 OF 8 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Proteokinain A novel 300 kDa ATP-dependent protease is distinct from the
proteasome but has two partial proteasome-like activities.
SO FASEB Journal, (March 7, 2001) Vol. 15, No. 4, pp. A24. print.
Meeting Info.: Annual Meeting of the Federation of American Societies for
Experimental Biology on Experimental Biology 2001 Orlando, Florida, USA
March 31-April 04, 2001
ISSN: 0892-6638.

L2 ANSWER 3 OF 8 MEDLINE DUPLICATE 2
TI Human THP-1 monocytic leukemic cells induced to undergo monocytic
differentiation by bryostatin 1 are refractory to proteasome inhibitor-induced apoptosis.
SO CANCER RESEARCH, (2000 Aug 15) 60 (16) 4377-85.
Journal code: 2984705R. ISSN: 0008-5472.

L2 ANSWER 4 OF 8 MEDLINE DUPLICATE 3
TI Inhibition of ubiquitin-proteasome pathway activates a caspase-3-like
protease and induces Bcl-2 cleavage in human M-07e leukaemic cells.
SO BIOCHEMICAL JOURNAL, (1999 May 15) 340 (Pt 1) 127-33.
Journal code: 2984726R. ISSN: 0264-6021.

L2 ANSWER 5 OF 8 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Inhibition of ubiquitin-proteasome pathway activates caspase-3 (CPP32) and
induces BCL-2 cleavage in human M-07E leukemic cells.
SO Blood, (Nov. 15, 1998) Vol. 92, No. 10 SUPPL. 1 PART 1-2, pp. 375A.
Meeting Info.: 40th Annual Meeting of the American Society of Hematology
Miami Beach, Florida, USA December 4-8, 1998 The American Society of
Heamatology
. ISSN: 0006-4971.

L2 ANSWER 6 OF 8 MEDLINE DUPLICATE 4
TI The antitumor drug aclacinomycin A, which inhibits the degradation of
ubiquitinated proteins, shows selectivity for the chymotrypsin-like activity of the bovine pituitary 20 S proteasome.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1996 Jul 12) 271 (28) 16455-9.
Journal code: 2985121R. ISSN: 0021-9258.

L2 ANSWER 7 OF 8 MEDLINE DUPLICATE 5
TI Permanent occupancy of the human immunodeficiency virus type 1 enhancer by
NF-kappa B is needed for persistent viral replication in monocytes.
SO JOURNAL OF VIROLOGY, (1996 May) 70 (5) 2930-8.
Journal code: 0113724. ISSN: 0022-538X.

L2 ANSWER 8 OF 8 MEDLINE DUPLICATE 6
TI Enhancement of CPP32-like activity in the TNF-treated U937 cells by the
proteasome inhibitors.
SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (1996 Jul 5) 224 (1)
74-9.
Journal code: 0372516. ISSN: 0006-291X.

=> d ibib ab 6

L2 ANSWER 6 OF 8 MEDLINE DUPLICATE 4
ACCESSION NUMBER: 96279205 MEDLINE
DOCUMENT NUMBER: 96279205 PubMed ID: 8663210
TITLE: The antitumor drug aclacinomycin A, which inhibits the degradation of ubiquitinated proteins, shows selectivity for the chymotrypsin-like activity of the bovine pituitary 20 S proteasome.
COMMENT: Erratum in: J Biol Chem 1996 Sep 20;271(38):23602
AUTHOR: Figueiredo-Pereira M E; Chen W E; Li J; Johdo O
CORPORATE SOURCE: Department of Pharmacology, Mount Sinai School of Medicine
of City University of New York, New York, New York 10029,
USA.
CONTRACT NUMBER: NS-29936 (NINDS)
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1996 Jul 12) 271 (28)
16455-9.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199608
ENTRY DATE: Entered STN: 19960911
Last Updated on STN: 20000303
Entered Medline: 19960829
AB The antitumor drug aclacinomycin A was previously shown to inhibit the
degradation of ubiquitinated proteins in rabbit reticulocyte lysates with
an IC50 of 52 &mgr;M (Isoe, T., Naito, M., Shirai, A., Hirai, R., and Tsuruo, T.(1992) Biochim. Biophys. Acta 1117, 131-135). We report here
that from all the catalytic activities of the 20 S proteasome tested, the chymotrypsin-like activity was the only one affected by the antitumor drug. An important requirement for inhibition of the chymotrypsin-like
activity seemed to be the presence of hydrophobic nonpolar residues in
positions P1 to P3. Degradation of Z-E(OtBu)AL-pNA and Z-LLL-AMC at pH 7.5 was dramatically (87-98%) inhibited by 50 microM
of the drug, while that of Z-GGL-pNA (containing uncharged polar residues
in positions P2 and P3) and succinyl-LLVY-AMC (containing an uncharged
polar residue in the P1 position) was inhibited only 11 and 24%, respectively. Aclacinomycin A had no effect on cathepsin B, stimulated
trypsin, and inhibited chymotrypsin and, to a lesser extent, calpain. The
aglycone and sugar moieties of the cytotoxic drug are essential for inhibition. The results presented here support a major role for the chymotrypsin-like activity in the degradation of ubiquitinated proteins.
Aclacinomycin A is the first described non-peptidic inhibitor showing
discrete selectivity for the chymotrypsin-like activity of the 20 S proteasome.

=> d 6 all

L2 ANSWER 6 OF 8 MEDLINE DUPLICATE 4
AN 96279205 MEDLINE
DN 96279205 PubMed ID: 8663210
TI The antitumor drug aclacinomycin A, which inhibits the degradation of
ubiquitinated proteins, shows selectivity for the chymotrypsin-like activity of the bovine pituitary 20 S proteasome.

CM Erratum in: J Biol Chem 1996 Sep 20;271(38):23602
AU Figueiredo-Pereira M E; Chen W E; Li J; Johdo O
CS Department of Pharmacology, Mount Sinai School of Medicine of City
University of New York, New York, New York 10029, USA.
NC NS-29936 (NINDS)
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1996 Jul 12) 271 (28) 16455-9.
Journal code: 2985121R. ISSN: 0021-9258.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199608
ED Entered STN: 19960911
Last Updated on STN: 20000303
Entered Medline: 19960829
AB The antitumor drug aclacinomycin A was previously shown to inhibit the
degradation of ubiquitinated proteins in rabbit reticulocyte lysates with
an IC50 of 52 &mgr;M (Isoe, T., Naito, M., Shirai, A., Hirai, R., and Tsuruo, T.(1992) Biochim. Biophys. Acta 1117, 131-135). We report here
that from all the catalytic activities of the 20 S proteasome tested, the chymotrypsin-like activity was the only one affected by the antitumor drug. An important requirement for inhibition of the chymotrypsin-like
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in positions P2 and P3) and succinyl-LLVY-AMC (containing an uncharged
polar residue in the P1 position) was inhibited only 11 and 24%, respectively. Aclacinomycin A had no effect on cathepsin B, stimulated
trypsin, and inhibited chymotrypsin and, to a lesser extent, calpain. The
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Aclacinomycin A is the first described non-peptidic inhibitor showing
discrete selectivity for the chymotrypsin-like activity of the 20 S proteasome.
CT Check Tags: Animal; Support, U.S. Gov't, P.H.S.
Aclarubicin: CH, chemistry
*Aclarubicin: PD, pharmacology
Antibiotics, Anthracycline: CH, chemistry
*Antibiotics, Anthracycline: PD, pharmacology
Catalysis
Cattle
*Chymotrypsin: AI, antagonists & inhibitors
Chymotrypsin: ME, metabolism
*Cysteine Endopeptidases: DE, drug effects
Cysteine Endopeptidases: ME, metabolism
Hydrolysis
Molecular Structure
*Multienzyme Complexes: DE, drug effects
Multienzyme Complexes: ME, metabolism
*Pituitary Gland: EN, enzymology
*Proteins: ME, metabolism
Ubiquitins: ME, metabolism
RN 57576-44-0 (Aclarubicin)
CN 0 (Antibiotics, Anthracycline); 0 (Multienzyme Complexes); 0 (Proteins); 0
(Ubiquitins); EC 3.4.21.1 (Chymotrypsin); EC 3.4.22 (Cysteine Endopeptidases); EC 3.4.99.46 (multicatalytic endopeptidase complex)

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317877 Z
620 LLL
4 LLLS
620 LLL
(LLL OR LLLS)
L3 6 Z-LLL
(Z(W)LLL)

=> d 1-6 all

L3 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2002 ACS
AN 2002:8014 CAPLUS
DN 136:260440
TI Activation of the MEK/MAPK Pathway Is Involved in Bryostatin1-Induced
Monocytic Differentiation and Up-regulation of X-Linked Inhibitor of
Apoptosis Protein
AU Lin, Hong; Chen, Catheryne; Li, Xiaohua; Chen, Ben D.
CS Division of Hematology-Oncology, Barbara Ann Karmanos Cancer Institute,
Wayne State University School of Medicine, Detroit, MI, 48201, USA
SO Experimental Cell Research (2002), 272(2), 192-198
CODEN: ECREAL; ISSN: 0014-4827
PB Academic Press
DT Journal
LA English
CC 13-6 (Mammalian Biochemistry)
AB Induction of monocytic differentiation by bryostatin1 (bryo1) conferred on
THP-1 leukemia cells the ability to resist Z-LLL
-CHO-induced apoptosis. The mechanism of resistance developed during this
process was investigated. Apoptosis resistance was assocd. with an enhanced expression of X-linked inhibitor of apoptosis protein (XIAP), an

endogenous caspase inhibitor, in differentiated THP-1 cells. Bryo1 also
increased the level of c-IAP-1, yet decreased the level of c-IAP-2 in THP-1 cells, indicating that distinct regulatory mechanisms are operative.
In addn., treatment of THP-1 cells with bryo1 induced a rapid and sustained activation of MEK, prior to the upregulation of XIAP and monocytic differentiation. Pretreatment of THP-1 cells with MEK inhibitors (U0126 and PD98059) prior to bryo1 induction blocked the expression of both XIAP and the c-fms product (M-CSF receptor), a hallmark
of monocytic differentiation, but not Bcl-2. In addn., the expression of
XIAP in bryo1-treated cells was inhibited by CAPE, a NF-.kappa.B-specific
inhibitor, indicating that its expression is under the transcriptional regulation of NF-.kappa.B downstream of the MEK/MAPK pathway. The
importance of XIAP in mediating apoptosis resistance was illustrated in
cells transiently transfected with XIAP, which conferred on THP-1 cells
the ability to resist **Z-LLL-CHO**-induced apoptosis.
These findings suggest that the expression of XIAP is linked to monocytic
differentiation in bryo1-treated THP-1 cells and represents one of the potential antiapoptotic mechanisms acquired during this process. (c) 2002
Academic Press.
ST bryostatin MEK NFkappaB XIAP monocyte differentiation apoptosis
IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study) (I.kappa.B-.alpha. (NF-.kappa.B inhibitor .alpha.); activation of MEK/MAPK pathway is involved in bryostatin1-induced monocytic
differentiation and NF-.kappa.B-dependent up-regulation of X-linked
inhibitor of apoptosis protein)
IT Transcription factors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (NF-.kappa.B (nuclear factor .kappa.B); activation of MEK/MAPK pathway
is involved in bryostatin1-induced monocytic differentiation and NF-.kappa.B-dependent up-regulation of X-linked inhibitor of apoptosis
protein)
IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study) (XIAP; activation of MEK/MAPK pathway is involved in bryostatin1-induced monocytic differentiation and NF-.kappa.B-dependent
up-regulation of X-linked inhibitor of apoptosis protein)
IT Apoptosis
Cell differentiation
Human
Monocyte
Transcriptional regulation
(activation of MEK/MAPK pathway is involved in bryostatin1-induced
monocytic differentiation and NF-.kappa.B-dependent up-regulation of
X-linked inhibitor of apoptosis protein)
IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study) (cIAP1; activation of MEK/MAPK pathway is involved in bryostatin1-induced monocytic differentiation and NF-.kappa.B-dependent
up-regulation of X-linked inhibitor of apoptosis protein)
IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study) (cIAP2; activation of MEK/MAPK pathway is involved in bryostatin1-induced monocytic differentiation and NF-.kappa.B-dependent
up-regulation of X-linked inhibitor of apoptosis protein)
IT 142805-58-1, MEK kinase
RL: BSU (Biological study, unclassified); BIOL (Biological study) (activation of MEK/MAPK pathway is involved in bryostatin1-induced
monocytic differentiation and NF-.kappa.B-dependent up-regulation of
X-linked inhibitor of apoptosis protein)
IT 83314-01-6, Bryostatin1
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(activation of MEK/MAPK pathway is involved in bryostatin1-induced
monocytic differentiation and NF-.kappa.B-dependent up-regulation of
X-linked inhibitor of apoptosis protein)
RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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L3 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2002 ACS
AN 2000:642189 CAPLUS
DN 133:290788
TI Human THP-1 monocytic leukemic cells induced to undergo monocytic
differentiation by bryostatin 1 are refractory to proteasome inhibitor-induced apoptosis
AU Chen, Catheryne; Lin, Hong; Karanes, Chachata; Pettit, George R.; Chen,
Ben D.
CS Division of Hematology-Oncology, Barbara Ann Karmanos Cancer Institute,
Wayne State University School of Medicine, Detroit, MI, 48201, USA
SO Cancer Research (2000), 60(16), 4377-4385
CODEN: CNREA8; ISSN: 0008-5472

PB American Association for Cancer Research
DT Journal
LA English
CC 1-6 (Pharmacology)
Section cross-reference(s): 14
AB The ubiquitin-proteasome pathway is the principal mechanism for the
degrdn. of short-lived proteins in eukaryotic cells. We demonstrated that
treatment of THP-1 human monocytic leukemia cells with **Z-LLL-CHO**6, a reversible proteasome inhibitor, induced cell death through an apoptotic pathway. Apoptosis in THP-1 cells induced by **Z-LLL-CHO** involved a cytochrome c-dependent pathway,
which included the release of mitochondrial cytochrome c, activation of
caspase-9 and -3, and cleavage of Bcl-2 into a shortened 22-kDa fragment.
Induction of apoptosis by protease inhibitor also was detected in U937 and
TF-1 leukemia cell lines and cells obtained from acute myelogenous leukemia patients but not in normal human blood monocytes. Treatment of
human blood monocytes with **Z-LLL-CHO** did not induce apoptosis or Bcl-2 cleavage in these cells that rarely proliferate. Interestingly, when THP-1 cells were induced to undergo monocytic differentiation by bryostatin 1, a naturally occurring protein kinase C activator, they were no longer susceptible to apoptosis induced by **Z-LLL-CHO**. Bryostatin 1-induced differentiation of
THP-1 cells was assocd. with growth arrest, acquisition of adherent capacity, and expression of membrane markers characteristic of blood
monocytes. Likewise, differentiated THP-1 cells were refractory to **Z-LLL-CHO**-induced cytochrome c release, caspase
activation, and Bcl-2 cleavage. Resistance to **Z-LLL**
-CHO-induced apoptosis in differentiated THP-1 cells was not due to cell
cycle arrest. These findings show that the action of proteasome inhibitors is mediated primarily through a cytochrome c-dependent pathway
and induces apoptosis in leukemic cells that are not differentiated.
ST protease inhibitor apoptosis leukemia antitumor resistance; caspase cytochrome Bcl2 leukemia protease inhibitor
IT Drug resistance
(antitumor; human THP-1 monocytic leukemic cells induced to undergo
monocytic differentiation by bryostatin 1 are refractory to proteasome
inhibitor-induced apoptosis)
IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
(Biological study); PROC (Process)
(bcl-2; human THP-1 monocytic leukemic cells induced to undergo
monocytic differentiation by bryostatin 1 are refractory to proteasome
inhibitor-induced apoptosis)
IT Apoptosis
Cell differentiation
(human THP-1 monocytic leukemic cells induced to undergo monocytic
differentiation by bryostatin 1 are refractory to proteasome
inhibitor-induced apoptosis)
IT Antitumor agents
(leukemia; human THP-1 monocytic leukemic cells induced to undergo
monocytic differentiation by bryostatin 1 are refractory to proteasome
inhibitor-induced apoptosis)
IT Antitumor agents
(resistance to; human THP-1 monocytic leukemic cells induced to undergo
monocytic differentiation by bryostatin 1 are refractory to proteasome
inhibitor-induced apoptosis)
IT 133407-82-6
RL: BAC (Biological activity or effector, except adverse); BSU (Biological
study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
(Uses)
(human THP-1 monocytic leukemic cells induced to undergo monocytic
differentiation by bryostatin 1 are refractory to proteasome
inhibitor-induced apoptosis)
IT 9007-43-6, Cytochrome c, biological studies 169592-56-7, Caspase-3
180189-96-2, Caspase-9
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
(Biological study); PROC (Process)
(human THP-1 monocytic leukemic cells induced to undergo monocytic
differentiation by bryostatin 1 are refractory to proteasome
inhibitor-induced apoptosis)
RE.CNT 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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L3 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2002 ACS
AN 1999:369701 CAPLUS
DN 131:142589
TI Inhibition of ubiquitin-proteasome pathway activates a caspase-3-like
protease and induces Bcl-2 cleavage in human M-07e leukaemic cells
AU Zhang, Xue-Min; Lin, Hong; Chen, Catheryne; Chen, Ben D.-M.
CS Division of Hematology-Oncology, Department of Internal Medicine, Wayne
State University School of Medicine, Detroit, MI, 48201, USA
SO Biochemical Journal (1999), 340(1), 127-133
CODEN: BIJOAK; ISSN: 0264-6021
PB Portland Press Ltd.
DT Journal
LA English
CC 13-6 (Mammalian Biochemistry)
AB The ubiquitin-proteasome pathway is the principal mechanism for the
degrdn. of short-lived proteins in eukaryotic cells. Here we examine the
possibility that ubiquitin-proteasome is involved in regulating the levels
of Bcl-2, which is abundantly expressed in M-07e cells, a
granulocyte/macrophage colony-stimulating factor (GM-CSF)-dependent human
leukemic cell line. Apoptosis in M-07e cells, induced by GM-CSF
withdrawal, was assocd. with a gradual cleavage of Bcl-2 into a 22 kDa
fragment. Treatment of M-07e cells with benzyloxycarbonyl-Leu-Leu-L-
leucinal (Z-LLL-CHO; MG-132), a reversible
ubiquitin-proteasome inhibitor, markedly accelerated the cleavage of Bcl-2
and promoted cell death through the apoptotic pathway. The cleavage of
Bcl-2 was inhibited by a caspase-3 (CPP32)-specific inhibitor
[acetyl-Asp-Glu-Val-Asp-CHO (DEVD-CHO)] but not caspase 1 inhibitor
(acetyl-Tyr-Val-Ala-Asp-CHO), suggesting that Bcl-2 is a proteolytic
substrate of a caspase-3-like protease activated during apoptosis. The
simultaneous addn. of recombinant human GM-CSF (rhGM-CSF) to M-07e
cultures delayed the activation of caspase 3 and Bcl-2 cleavage triggered
by Z-LLL-CHO, suggesting that the activation of the
GM-CSF signaling pathway can partly overcome the apoptotic effect induced
by Z-LLL-CHO. Apoptosis induced by inhibition of the
proteasome pathway was verified in studies with lactacystin, a highly
specific and irreversible proteasome inhibitor. Lactacystin-induced
apoptosis in M-07e cells was remarkably similar to that induced by
Z-LLL-CHO, which included caspase 3 activation, cleavage
of Bcl-2 into a 22 kDa fragment and, ultimately, cell death. These
results showed that inhibition of the ubiquitin-proteasome pathways can
lead to the activation of a DEVD-CHO-sensitive caspase and induces Bcl-2
cleavage, which might have a role in mediating apoptosis in M-07e cells.
ST ubiquitin proteasome caspase Bcl2 apoptosis leukemic cell
IT Apoptosis
(Bcl-2 is proteolytic substrate of caspase-3-like protease activated during apoptosis)
IT Animal cell line
(M-07e; inhibition of ubiquitin-proteasome pathway activates caspase-3-like protease and induces Bcl-2 cleavage in human M-07e
leukemic cells)
IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
(Biological study); PROC (Process)
(bcl-2; inhibition of ubiquitin-proteasome pathway activates caspase-3-like protease and induces Bcl-2 cleavage in human M-07e
leukemic cells)
IT 83869-56-1, GM-CSF
RL: BAC (Biological activity or effector, except adverse); BSU (Biological
study, unclassified); BIOL (Biological study)
(effect on activation of caspase 3 and cleavage of Bcl-2 induced by ubiquitin-proteasome inhibitor which triggers apoptosis of human M-07e
leukemic cells)
IT 60267-61-0, Ubiquitin 140879-24-9, Proteasome 169592-56-7, Caspase-3
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
(Biological study); PROC (Process)
(inhibition of ubiquitin-proteasome pathway activates caspase-3-like
protease and induces Bcl-2 cleavage in human M-07e leukemic cells)
RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L3 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2002 ACS
AN 1996:423977 CAPLUS
DN 125:104514
TI The antitumor drug aclacinomycin A, which inhibits the degradation of
ubiquitinated proteins, shows selectivity for the chymotrypsin-like activity of the bovine pituitary 20 S proteasome
AU Figueiredo-Pereira, Maria E.; Chen, Wei Er; Li, Jingrong; Johdo, Osamu
CS Dep. Pharmacol., Mount Sinai Sch. Med. City Univ. New York, New York, NY,
10029, USA
SO J. Biol. Chem. (1996), 271(28), 16455-16459
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English

CC 1-6 (Pharmacology)
Section cross-reference(s): 7
AB The antitumor drug aclacinomycin A was previously shown to inhibit the degrdn. of ubiquitinated proteins in rabbit reticulocyte lysates with an IC50 of 52 .mu.M. We report here that from all the catalytic activities of the 20 S proteasome tested, the chymotrypsin-like activity was the only one affected by the antitumor drug. An important requirement for inhibition of the chymotrypsin-like activity seemed to be the presence of hydrophobic non-polar residues in positions P1 to P3. Degrdn. of Z-E(OtBu)Al-pNA and **Z-LLL**-AMC at pH 7.5 was dramatically (87-98%) inhibited by 50 .mu.M of the drug, while that of Z-GGL-pNA (contg. uncharged polar residues in positions P2 and P3) and succinyl-LLVY-AMC (contg. an uncharged polar residue in the P1 position) was inhibited only 11 and 24%, resp. Aclacinomycin A had no effect on cathepsin B, stimulated trypsin, and inhibited chymotrypsin and, to a lesser extent, calpain. The aglycon and sugar moieties of the cytotoxic drug are essential for inhibition. The results presented here support a major role for the chymotrypsin-like activity in the degrdn. of ubiquitinated proteins. Aclacinomycin A in the first described non-peptidic inhibitor showing discrete selectivity for the chymotrypsin-like activity of the 20 S proteasome.
ST antitumor aclacinomycin A pituitary proteasome chymotrypsin
IT Proteins, specific or class
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ubiquitinated; aclacinomycin A shows selectivity for chymotrypsin-like activity of pituitary 20 S proteasome)
IT 57576-44-0, Aclacinomycin A
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(aclacinomycin A shows selectivity for chymotrypsin-like activity of pituitary 20 S proteasome)
IT 140879-24-9, Proteasome
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(aclacinomycin A shows selectivity for chymotrypsin-like activity of pituitary 20 S proteasome)

L3 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2002 ACS
AN 1996:419831 CAPLUS
DN 125:138656
TI Enhancement of CPP32-like activity in the TNF-treated U937 cells by the proteasome inhibitors
AU Fujita, Eriko; Mukasa, Takeshi; Tsukahara, Toshibumi; Arahata, Kiichi; Omura, Satoshi; Momoi, Takashi
CS Division Development and Differentiation, NCNP, Tokyo, 187, Japan
SO Biochem. Biophys. Res. Commun. (1996), 224(1), 74-79
CODEN: BBRCA9; ISSN: 0006-291X
DT Journal
LA English
CC 13-2 (Mammalian Biochemistry)
Section cross-reference(s): 7
AB CPP32, one of the Ced-3/ICE-like proteases which is most closely related to CED-3 in the apoptotic protease in Caenorhabditis elegans, is activated during apoptosis induced by anti-Fas and tumor necrosis factor (TNF). Since processing of CPP32 is important for the activation, the effects of protease inhibitors on CPP32-like activity were examd. in the TNF-treated U937 cells. Unexpectedly, proteasome inhibitors (at 5 .mu.M) such as Z-LLnV, **Z-LLL**, and lactacystin enhanced CPP32-like activity, Ac-DEVD-MCA degrading activity, in the TNF-treated U937 cells in 3 h, but E64d cysteine protease inhibitor did not. These proteasome inhibitors alone did not enhance CCP32-like activity in the untreated U937 cells under the condition used. The proteasome seems to protect the cells from apoptosis by degrading CPP32-like protease or its processing enzyme.
ST CPP32 protease apoptosis proteasome
IT Apoptosis
(enhancement of CPP32-like activity in the TNF-treated U937 cells by the proteasome inhibitors)
IT Lymphokines and Cytokines
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(tumor necrosis factor, enhancement of CPP32-like activity in the TNF-treated U937 cells by the proteasome inhibitors)
IT 140879-24-9, Proteasome
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(enhancement of CPP32-like activity in the TNF-treated U937 cells by the proteasome inhibitors)
IT 9055-67-8, Poly(ADP-ribose) polymerase 169332-61-0 169592-57-8, Proteinase CPP32
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(enhancement of CPP32-like activity in the TNF-treated U937 cells by the proteasome inhibitors)

L3 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2002 ACS
AN 1996:227272 CAPLUS
DN 124:286790
TI Permanent occupancy of the human immunodeficiency virus type 1 enhancer by NF-.kappa.B is needed for persistent viral replication in monocytes
AU Jacque, J.-M.; Fernandez, B.; Arenzana-Seisdedos, F.; Thomas, D.; Baleux, F.; Virelizier, J.-L.; Bachelerie, F.
CS Unite d'Immunol. Virale, Inst. Pasteur, Paris, 75724, Fr.
SO J. Virol. (1996), 70(5), 2930-8
CODEN: JOVIAM; ISSN: 0022-538X
DT Journal
LA English
CC 15-8 (Immunochemistry)
Section cross-reference(s): 10
AB This work aimed to ascertain the role of .kappa.B-responsive elements of the human immunodeficiency virus type 1 (HIV-1) enhancer not only in early initiation but also in long-term maintenance of proviral transcription in cells of the monocytic lineage. For this purpose, the authors used three main approaches. The first was to abruptly terminate tumor necrosis factor-induced NF-.kappa.B binding to the enhancer sequences in U1 monocytic cells, using a short pulse of exogenous tumor necrosis factor. This resulted in concomitant decrease in nuclear NF-.kappa.B DNA-binding activity and endogenous long terminal repeat transcription activity. The second was to suppress the permanent NF-.kappa.B translocation induced by HIV-1 replication itself in chronically infected U937 cells, using a

specific proteasome inhibitor (Z-LLL-H). As early as
2 h after addn. of the inhibitor to the culture medium, there was an
inhibition of both constitutive activation of NF-.kappa.B and HIV-1 genome
expression. The third approach was to monitor the replication competence
in U937 cells of an infectious HIV-1 provirus carrying point mutations in
the .kappa.B-responsive elements of both long terminal repeats. Compared
with its wild-type counterpart, this mutated provirus showed a profoundly
decreased, Z-LLL-H-insensitive transcriptional and
replicative activity in U937 monocytes. Together, these results indicate
that occupancy of the viral enhancer by NF-.kappa.B (p50/p65) heterodimers
is required for ongoing transcription of integrated HIV provirus in
monocytes, even in cells chronically infected and permanently producing
functional HIV Tat protein. Thus, the ability of HIV-1 replication to
activate NF-.kappa.B is crucial to the intense self-perpetuated viral
transcription obsd. in cells of the monocytic lineage.
ST HIV1 virus enhancer kappaB factor monocyte; immunodeficiency virus
enhancer kappaB factor monocyte
IT Transcription, genetic
(of integrated HIV provirus transcription in human monocytes)
IT Ribonucleic acid formation factors
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(NF-.kappa.B (nuclear factor .kappa.B), initiation and perpetuation of
integrated HIV provirus transcription in human monocytes is dependent
on occupancy of enhancer sequence by NF-.kappa.B)
IT Genetic element
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(RNA formation factor NF-.kappa.B-responsive element, initiation and
perpetuation of integrated HIV provirus transcription in human
monocytes is dependent on occupancy of enhancer sequence by
NF-.kappa.B)
IT Monocyte
(disease, infection, with human immunodeficiency virus; initiation and
perpetuation of integrated HIV provirus transcription is dependent on
occupancy of enhancer sequence by NF-.kappa.B)
IT Virus, animal
(human immunodeficiency 1, initiation and perpetuation of integrated
HIV provirus transcription in human monocytes is dependent on occupancy
of enhancer sequence by NF-.kappa.B)
IT Genetic element
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(long terminal repeat, initiation and perpetuation of integrated HIV
provirus transcription in human monocytes is dependent on occupancy of
enhancer sequence by NF-.kappa.B)

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for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> E "BENZYLOXY CARBONYL-LEU-LEU-L-LEUCINAL"/CN 25
E1 1 BENZYLOXIRANE/CN
E2 1 BENZYLOXY/CN
E3 0 --> BENZYLOXY CARBONYL-LEU-LEU-L-LEUCINAL/CN
E4 1 BENZYLOXY TERT-BUTYL NITROXIDE/CN
E5 1 BENZYLOXY(ETHYL)AMINE/CN
E6 1 BENZYLOXY(PHENYLSULFONYL)METHANE/CN
E7 1 BENZYLOXY(TERT-BUTYL)DIMETHYLSILANE/CN
E8 1 BENZYLOXY, .ALPHA.,.ALPHA.-DIMETHYL-/CN
E9 1 BENZYLOXY, .ALPHA.-ETHYL-.ALPHA.-METHYL-/CN
E10 1 BENZYLOXY, .ALPHA.-METHYL-/CN
E11 1 BENZYLOXY, DIHYDROXY-/CN
E12 1 BENZYLOXY, P-METHYL-/CN
E13 1 BENZYLOXY-1-BROMO-2-FLUOROBENZENE/CN
E14 1 BENZYLOXY-1-NAPHTHYLPHENYLSILANE/CN
E15 1 BENZYLOXYACETALDEHYDE DIETHYL ACETAL/CN
E16 1 BENZYLOXYACETAMIDE/CN
E17 1 BENZYLOXYACETIC ACID/CN
E18 1 BENZYLOXYACETIC ACID HYDRAZIDE/CN
E19 1 BENZYLOXYACETIC ACID METHYL ESTER/CN
E20 1 BENZYLOXYACETIC CHLORIDE/CN
E21 1 BENZYLOXYACETYL FLUORIDE/CN
E22 1 BENZYLOXYAMINE/CN
E23 1 BENZYLOXYAMINE, .ALPHA.-(DIETHYLAMINO)-N,N-DIETHYL-/CN
E24 1 BENZYLOXYAMINE, .ALPHA.-ETHYL-/CN
E25 1 BENZYLOXYAMINE, .ALPHA.-METHYL-/CN

=> E "BENZYLOXYCARBONYL-LEU-LEU-L-LEUCINAL"/CN 25
E1 1 BENZYLOXYCARBONYL-L-VALYL-N.OMEGA.-NITRO-L-ARGININE METHYL ESTER/CN
E2 1 BENZYLOXYCARBONYL-L-VALYLGLYCINE METHYL ESTER/CN
E3 0 --> BENZYLOXYCARBONYL-LEU-LEU-L-LEUCINAL/CN
E4 1 BENZYLOXYCARBONYL-N-METHYL-L-PHENYLALANINE PENTACHLOROPHENYL ESTER/CN
E5 1 BENZYLOXYCARBONYL-N-PHENYLGLYCINE/CN
E6 1 BENZYLOXYCARBONYL-O-BENZYL-L-SERINE P-NITROPHENYL ESTER/CN
E7 1 BENZYLOXYCARBONYL-O-BENZYL-L-SERYL-L-ISOLEUCYL-L-LEUCYL-L-ASPARAGINAMIDE/CN
E8 1 BENZYLOXYCARBONYL-O-BENZYL-L-TYROSINE P-NITROPHENYL ESTER/CN

E9 1 BENZYLOXYCARBONYL-O-TERT-BUTYL-L-TYROSYL-L-GLUTAMINYL-L-LEUCYL-.GAMMA.-TERT-BUTYL-L-GLUTAMYL-L-ASPARAGINYL-O-TERT-BUTYL-L-TYROSINE HYDRAZIDE/CN
E10 1 BENZYLOXYCARBONYL-O-TERT-BUTYL-L-TYROSYLGLYCINE/CN
E11 1 BENZYLOXYCARBONYL-O-TERT-BUTYL-L-TYROSYLGLYCINE ETHYL ESTER/CN
E12 1 BENZYLOXYCARBONYL-P-NITRO-L-PHENYLALANINE/CN
E13 1 BENZYLOXYCARBONYL-P-NITRO-L-PHENYLALANYL-.BETA.-PHENYL-D-LACTIC ACID METHYL ESTER/CN
E14 1 BENZYLOXYCARBONYL-P-NITRO-L-PHENYLALANYL-.BETA.-PHENYL-L-LACTIC ACID METHYL ESTER/CN
E15 1 BENZYLOXYCARBONYL-P-NITRO-L-PHENYLALANYL-D-PHENYLALANINE METHYL ESTER/CN
E16 1 BENZYLOXYCARBONYL-P-NITRO-L-PHENYLALANYL-L-PHENYLALANINE METHYL ESTER/CN
E17 1 BENZYLOXYCARBONYL-PHE-ARG-ALA-GLY-OH/CN
E18 1 BENZYLOXYCARBONYL-S-BENZYLPENICILLAMINE P-NITROPHENYL ESTER/CN
E19 1 BENZYLOXYCARBONYLACETYLENE/CN
E20 1 BENZYLOXYCARBONYLAMINOACETYL CHLORIDE/CN
E21 1 BENZYLOXYCARBONYLAMPICILLIN/CN
E22 1 BENZYLOXYCARBONYLANTHRANILIC ACID/CN
E23 1 BENZYLOXYCARBONYLASPARTYLALANINE/CN
E24 1 BENZYLOXYCARBONYLCYANAMIDE POTASSIUM SALT/CN
E25 1 BENZYLOXYCARBONYLCYANAMIDE SODIUM SALT/CN

=> E "BENZYLOXYCARBONYL-L-LEUCYL"/CN 25
E1 1 BENZYLOXYCARBONYL-L-LEUCINE N,N-DIPHENYLHYDRAZIDE/CN
E2 1 BENZYLOXYCARBONYL-L-LEUCINE O-NITROPHENYL ESTER/CN
E3 0 --> BENZYLOXYCARBONYL-L-LEUCYL/CN
E4 1 BENZYLOXYCARBONYL-L-LEUCYL-L-ALANINE METHYL ESTER/CN
E5 1 BENZYLOXYCARBONYL-L-LEUCYL-L-ALANINE PHENYL ESTER/CN
E6 1 BENZYLOXYCARBONYL-L-LEUCYL-L-ASPARAGINAMIDE/CN
E7 1 BENZYLOXYCARBONYL-L-LEUCYL-L-GLUTAMINE/CN
E8 1 BENZYLOXYCARBONYL-L-LEUCYL-L-GLUTAMINYL-L-ALANYL-L-LEUCINE METHYL ESTER/CN
E9 1 BENZYLOXYCARBONYL-L-LEUCYL-L-LEUCINE/CN
E10 1 BENZYLOXYCARBONYL-L-LEUCYL-L-LEUCINE METHYL ESTER/CN
E11 1 BENZYLOXYCARBONYL-L-LEUCYL-L-METHIONINAMIDE/CN
E12 1 BENZYLOXYCARBONYL-L-LEUCYL-L-PHENYLALANINE CHLOROMETHYL KETONE/CN
E13 1 BENZYLOXYCARBONYL-L-LEUCYL-N6-TERT-BUTYLOXYCARBONYL-L-LYSYL-L-PROLYLGLYCINAMIDE/CN
E14 1 BENZYLOXYCARBONYL-L-LYSINE 4-NITROPHENYL ESTER/CN
E15 1 BENZYLOXYCARBONYL-L-LYSINE BENZYL ESTER TOSYLATE/CN
E16 1 BENZYLOXYCARBONYL-L-METHIONINE/CN
E17 1 BENZYLOXYCARBONYL-L-METHIONINE O-NITROPHENYL ESTER/CN
E18 1 BENZYLOXYCARBONYL-L-METHIONINE P-NITROPHENYL ESTER/CN
E19 1 BENZYLOXYCARBONYL-L-METHIONYL-L-LEUCINAMIDE/CN
E20 1 BENZYLOXYCARBONYL-L-METHIONYLGLYCINE ETHYL ESTER/CN
E21 1 BENZYLOXYCARBONYL-L-NITROARGININE 2,4-DINITROPHENYL ESTER/CN
E22 1 BENZYLOXYCARBONYL-L-NORLEUCINE/CN
E23 1 BENZYLOXYCARBONYL-L-PHENYLALANINAMIDE/CN
E24 1 BENZYLOXYCARBONYL-L-PHENYLALANINE/CN
E25 1 BENZYLOXYCARBONYL-L-PHENYLALANINE O-NITROPHENYL ESTER/CN

=> E "BENZYLOXYCARBONYL-L-LEUCYL-L-LEUCYL-L-LEUCINAL"/CN 25
E1 1 BENZYLOXYCARBONYL-L-LEUCYL-L-LEUCINE/CN
E2 1 BENZYLOXYCARBONYL-L-LEUCYL-L-LEUCINE METHYL ESTER/CN
E3 0 --> BENZYLOXYCARBONYL-L-LEUCYL-L-LEUCYL-L-LEUCINAL/CN
E4 1 BENZYLOXYCARBONYL-L-LEUCYL-L-METHIONINAMIDE/CN
E5 1 BENZYLOXYCARBONYL-L-LEUCYL-L-PHENYLALANINE CHLOROMETHYL KETONE/CN
E6 1 BENZYLOXYCARBONYL-L-LEUCYL-N6-TERT-BUTYLOXYCARBONYL-L-LYSYL-L-PROLYLGLYCINAMIDE/CN
E7 1 BENZYLOXYCARBONYL-L-LYSINE 4-NITROPHENYL ESTER/CN
E8 1 BENZYLOXYCARBONYL-L-LYSINE BENZYL ESTER TOSYLATE/CN
E9 1 BENZYLOXYCARBONYL-L-METHIONINE/CN
E10 1 BENZYLOXYCARBONYL-L-METHIONINE O-NITROPHENYL ESTER/CN
E11 1 BENZYLOXYCARBONYL-L-METHIONINE P-NITROPHENYL ESTER/CN
E12 1 BENZYLOXYCARBONYL-L-METHIONYL-L-LEUCINAMIDE/CN
E13 1 BENZYLOXYCARBONYL-L-METHIONYLGLYCINE ETHYL ESTER/CN
E14 1 BENZYLOXYCARBONYL-L-NITROARGININE 2,4-DINITROPHENYL ESTER/CN
E15 1 BENZYLOXYCARBONYL-L-NORLEUCINE/CN
E16 1 BENZYLOXYCARBONYL-L-PHENYLALANINAMIDE/CN
E17 1 BENZYLOXYCARBONYL-L-PHENYLALANINE/CN
E18 1 BENZYLOXYCARBONYL-L-PHENYLALANINE O-NITROPHENYL ESTER/CN
E19 1 BENZYLOXYCARBONYL-L-PHENYLALANYL ETHYLAMIDE/CN
E20 1 BENZYLOXYCARBONYL-L-PHENYLALANYL-.BETA.-ALANINE/CN
E21 1 BENZYLOXYCARBONYL-L-PHENYLALANYL-.BETA.-PHENYL-L-LACTIC ACID ETHYL ESTER/CN
E22 1 BENZYLOXYCARBONYL-L-PHENYLALANYL-.BETA.-PHENYL-L-LACTIC ACID METHYL ESTER/CN
E23 1 BENZYLOXYCARBONYL-L-PHENYLALANYL-D-ALANINE/CN
E24 1 BENZYLOXYCARBONYL-L-PHENYLALANYL-D-ALANYL-L-ALANINE/CN
E25 1 BENZYLOXYCARBONYL-L-PHENYLALANYL-D-LEUCINE/CN

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COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
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SINCE FILE ENTRY TOTAL SESSION
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PASSWORD:
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2002
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                                    ENTRY   SESSION
FULL ESTIMATED COST                    2.66     38.91

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SINCE FILE     TOTAL
                                    ENTRY   SESSION
CA SUBSCRIBER PRICE                    0.00     -3.72

=> index bioscience health pharmacology
FILE 'DRUGMONOG' ACCESS NOT AUTHORIZED
COST IN U.S. DOLLARS                SINCE FILE     TOTAL
                                    ENTRY   SESSION
FULL ESTIMATED COST                    4.18     40.43

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SINCE FILE     TOTAL
                                    ENTRY   SESSION
CA SUBSCRIBER PRICE                    0.00     -3.72

INDEX 'ADISALERTS, ADISINSIGHT, ADISNEWS, AGRICOLA,
ANABSTR, AQUASCI,
    BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS,
BIOTECHDS, BIOTECHNO, CABA,
    CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI,
CROPB, CROPU, DDFB,
    DDFU, DGENE, DRUGB, DRUGLAUNCH, DRUGMONOG2, ...'
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77 FILES IN THE FILE LIST IN STNINDEX

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=> s z-lll or zlll
      15  FILE BIOSIS
      12  FILE BIOTECHNO
       8  FILE CANCERLIT
      13  FILE CAPLUS
       5  FILE DDFU
       6  FILE DRUGU
      11  FILE EMBASE
       8  FILE ESBIOBASE
  36 FILES SEARCHED...
       3  FILE JICST-EPLUS
       4  FILE LIFESCI
      12  FILE MEDLINE
       4  FILE PASCAL
      10  FILE SCISEARCH
       3  FILE TOXCENTER
       2  FILE USPATFULL
       1  FILE WPIDS
       1  FILE WPINDEX
  69 FILES SEARCHED...
       1  FILE NLDB

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L4  QUE Z-LLL OR ZLLL

=> d rank
F1        15  BIOSIS
F2        13  CAPLUS
F3        12  BIOTECHNO
F4        12  MEDLINE
F5        11  EMBASE
F6        10  SCISEARCH
F7         8  CANCERLIT
F8         8  ESBIOBASE
F9         6  DRUGU
F10        5  DDFU
F11        4  LIFESCI
F12        4  PASCAL
F13        3  JICST-EPLUS
F14        3  TOXCENTER
F15        2  USPATFULL
F16        1  WPIDS
F17        1  WPINDEX
F18        1  NLDB


=> file medline caplus biosis
COST IN U.S. DOLLARS                SINCE FILE     TOTAL
                                    ENTRY   SESSION
FULL ESTIMATED COST                    1.06     41.49

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)
SINCE FILE     TOTAL
                                    ENTRY   SESSION
CA SUBSCRIBER PRICE                    0.00     -3.72

FILE 'MEDLINE' ENTERED AT 10:49:38 ON 18 JUN 2002

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FILE 'BIOSIS' ENTERED AT 10:49:38 ON 18 JUN 2002
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L5        20 ZLLL

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ENTER L# LIST OR (END):15
'1-20' IS NOT VALID.  VALID FILE NAMES ARE 'MEDLINE,
CAPLUS, BIOSIS'
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referenced by any of the L#s specified for this DUPLICATE command.
The file names of duplicates that can be kept are listed above.
Please enter one of these file names.

=> dup rem l5
PROCESSING COMPLETED FOR L5
L6         7 DUP REM L5 (13 DUPLICATES REMOVED)

=> d ti 1-7

L6  ANSWER 1 OF 7  CAPLUS  COPYRIGHT 2002 ACS
DUPLICATE 1
TI  Receptor activator of NF-.kappa.B ligand induces the fusion of
mononuclear
    preosteoclasts into multinucleated osteoclasts

L6  ANSWER 2 OF 7    MEDLINE                  DUPLICATE 2
TI  Evidence for participation of a calpain-like cysteine protease in cell
    cycle progression through late G1 phase.

L6  ANSWER 3 OF 7    MEDLINE                  DUPLICATE 3
```

TI Differential inhibition of calpain and proteasome activities by peptidyl
aldehydes of di-leucine and tri-leucine.

L6 ANSWER 4 OF 7 MEDLINE DUPLICATE 4
TI Purification and characterization of an endogenous inhibitor specific to
the Z-Leu-Leu-Leu-MCA degrading activity in proteasome and its identification as heat-shock protein 90.

L6 ANSWER 5 OF 7 MEDLINE DUPLICATE 5
TI Purification and characterization of a Z-Leu-Leu-Leu-MCA degrading
protease expected to regulate neurite formation: a novel catalytic activity in proteasome.

L6 ANSWER 6 OF 7 MEDLINE DUPLICATE 6
TI Possible involvement of clathrin in neuritogenesis induced by a protease
inhibitor (benzyloxycarbonyl-Leu-Leu-Leu-aldehyde) in PC12 cells.

L6 ANSWER 7 OF 7 MEDLINE DUPLICATE 7
TI Isolation and characterization of possible target proteins responsible for
neurite outgrowth induced by a tripeptide aldehyde in PC12H cells.

=> file caplus
COST IN U.S. DOLLARS SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST 3.52 45.01

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SINCE FILE TOTAL
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CA SUBSCRIBER PRICE 0.00 -3.72

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the CAS Roles thesaurus (/RL field) in this file.

=> s zlll
L7 7 ZLLL

=> d 1-7 all

L7 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2002 ACS
AN 2000:820717 CAPLUS
DN 134:351164

TI Receptor activator of NF-.kappa.B ligand induces the fusion of mononuclear
preosteoclasts into multinucleated osteoclasts
AU Woo, Je-Tae; Kato, Masanori; Takami, Masamichi; Nagai, Kazuo
CS Department of Bioengineering, Tokyo Institute of Technology, Yokohama,
226-8501, Japan
SO Cytotechnology (2000), 33(1-3), 203-211
CODEN: CYTOER; ISSN: 0920-9069
PB Kluwer Academic Publishers
DT Journal
LA English
CC 13-6 (Mammalian Biochemistry)
AB The osteoclasts are bone-resorbing multinucleated cells formed by the
fusion of mononuclear preosteoclasts (pOCs) of hematopoietic origin. Although receptor activator of NF-.kappa.B ligand (RANKL) has been shown
to regulate osteoclast differentiation and function, its effect on the fusion of pOCs into multinucleated osteoclast-like cells (OCLs) has not
been known. Using our fusion assay system, that is not contaminated with
multinucleated cells (MNCs) and osteoblastic cells, we detd. the effect of
RANKL on the fusion of pOCs into MNCs. When pOCs were cultured on the
plates, most of pOCs died and disappeared from the plates within 24 h in
the absence of additives, but pOCs were fused to MNCs within 6 h in the
presence of RANKL. RANKL-induced MNCs showed typical properties of OCL
such as tartrate-resistant acid phosphatase (TRAP) activity, actin ring formation, and bone-resorbing activity. The fusion of pOCs into OCLs
induced by osteoblastic cells or RANKL was inhibited by OPG/OCIF, but that
induced by IL-1.beta. was not. Both RANKL- and IL-1.beta.-induced OCL
formation from pOCs was inhibited by ZLLL-H, a peptide inhibitor of proteasome. These findings indicate that RANKL supports the survival
of pOCs and induces the fusion of pOCs into OCLs and suggest that NF-.kappa.B activation is involved in these processes induced by RANKL and
IL-1.beta..
ST RANKL preosteoclast osteoclast fusion
IT Transcription factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(NF-.kappa.B (nuclear factor .kappa.B); receptor activator of NF-.kappa.B ligand induces the fusion of mononuclear preosteoclasts
into multinucleated osteoclasts in relation to)
IT Osteoclast
(preosteoclast; receptor activator of NF-.kappa.B ligand induces the fusion of mononuclear preosteoclasts into multinucleated osteoclasts)
IT Fusion, biological
Osteoclast
(receptor activator of NF-.kappa.B ligand induces the fusion of mononuclear preosteoclasts into multinucleated osteoclasts)
IT Interleukin 1.beta.
RL: BAC (Biological activity or effector, except adverse); BSU (Biological
study, unclassified); BIOL (Biological study)
(receptor activator of NF-.kappa.B ligand induces the fusion of mononuclear preosteoclasts into multinucleated osteoclasts in relation
to)
IT 207621-35-0, Receptor activator of NF-.kappa.B ligand
RL: BAC (Biological activity or effector, except adverse); BSU (Biological
study, unclassified); BIOL (Biological study)

(receptor activator of NF-.kappa.B ligand induces the fusion of mononuclear preosteoclasts into multinucleated osteoclasts)
IT 140879-24-9, Proteasome.
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(receptor activator of NF-.kappa.B ligand induces the fusion of mononuclear preosteoclasts into multinucleated osteoclasts in relation to)
RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
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(34) Yasuda, H; Proc Natl Acad Sci USA 1998, V95, P3597 CAPLUS

L7 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2002 ACS
AN 1997:505895 CAPLUS
DN 127:218366
TI Evidence for participation of a calpain-like cysteine protease in cell cycle progression through late G1 phase
AU Mellgren, Ronald
CS Dep. Pharmacol. Therapeutic, Medical Coll. Ohio, Toledo, OH, 43699-0008, USA
SO Biochemical and Biophysical Research Communications (1997), 236(3), 555-558
CODEN: BBRCA9; ISSN: 0006-291X
PB Academic
DT Journal
LA English
CC 13-6 (Mammalian Biochemistry)
AB Recent studies have demonstrated that cell-permeant protease inhibitors arrest human fibroblasts in late G1. The target for the inhibitors has been claimed to be either the proteasome, or a calpain-like cysteine protease activity. In the present investigation, the progression of serum-stimulated WI-38 fibroblasts into S-phase was partially inhibited by the cell-permeant general inhibitor of cysteine proteases, E64d, but not by its non-permeant analog, E64c. Exposure of fibroblasts in late G1 to the proteasome inhibitor, lactacystin, produced only a modest inhibition of progression into S-phase, and did not influence the extensive inhibition produced by the calpain-selective inhibitor, ZLLY-DMK. ZLLnV-CHO and ZLLL-CHO, which are reportedly selective for the proteasome, were less potent than ZLLY-DMK as inhibitors of S-phase progression. These results argue for the involvement of a calpain-like protease acting in late G1 to allow transit into S-phase.
ST calpain cell cycle
IT Interphase (cell cycle)
(G1-phase; calpain role in cell cycle progression through late G1 phase in human fibroblast)
IT Cell cycle
Fibroblast
(calpain role in cell cycle progression through late G1 phase in human fibroblast)
IT 78990-62-2, Calpain
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(calpain role in cell cycle progression through late G1 phase in human fibroblast)

L7 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2002 ACS
AN 1996:322381 CAPLUS
DN 125:28868
TI Differential inhibition of calpain and proteasome activities by peptidyl aldehydes of di-leucine and tri-leucine
AU Tsubuki, Satoshi; Saito, Yumiko; Tomioka, Masanori; Ito, Hisashi; Kawashima, Seiichi
CS Dep. Molecular Biol., The Tokyo Metropolitan Inst. Medical Science, Tokyo, 113, Japan
SO J. Biochem. (Tokyo) (1996), 119(3), 572-576
CODEN: JOBIAO; ISSN: 0021-924X
DT Journal
LA English
CC 7-3 (Enzymes)
AB To explore membrane-permeable synthetic inhibitors that discriminate between endogenous calpain and proteasome in cells, we examd. the inhibition profiles against calpain and proteasome in vitro and in vivo of peptidyl aldehydes possessing di-leucine and tri-leucine. The tripeptide aldehyde benzyloxycarbonyl-leucyl-leucyl-leucinal (ZLLLal) strongly inhibited calpain and proteasome activities in vitro. The concn. required for 50% inhibition (IC50) of the casein-degrading activity of calpain was 1.25 .mu.M, and the IC50s for the succinyl-leucyl-leucyl-valyl-tyrosine-4-methylcoumaryl-7-amide (SucLLVY-MCA)- and benzyloxycarbonyl-leucyl-leucyl-leucine-4-methylcoumaryl-7-amide (ZLLL-MCA)-degrading activities of proteasome were 850 and 100 nM, resp. On the other hand, the synthetic dipeptide aldehyde benzyloxycarbonyl-leucyl-leucinal (ZLLal) strongly inhibited the casein degrading activity of calpain (IC50 1.20 .mu.M), but the inhibition of proteasome was weak (IC50s for SucLLCY-MCA-

and
ZLLL-MCA-degrading activities were 120 and 110 .mu.M, resp.). Thus, while calpain was inhibited by similar concns. of ZLLal and ZLLLal, the inhibitory potencies of ZLLLal against the ZLLL-MCA- and SucLLVY-MCA-degrading activities of proteasome were 1,100 and 140 times stronger than those of ZLLal, resp. To evaluate the effectiveness of these inhibitors on intracellular proteasome, the induction of neurite outgrowth in PC12 cells caused by proteasome inhibition was examd. ZLLLal and ZLLal initiated neurite outgrowth with optimal concns. of 20 nM and 10 .mu.M, resp., again showing a big difference in the effective concns. for the proteasome inhibition as in vitro. As for the effect on intracellular calpain, the concns. of ZLLLal and ZLLal required for the inhibition of the autolytic activation of calpain in rabbit erythrocytes were 100 and 100 .mu.M or more, resp. The almost equal inhibitory potencies of ZLLLal and ZLLal were in agreement with the inhibition of calpain in vitro. These differential effects of inhibitors against calpain and proteasome are potentially useful for identifying the functions of calpain and proteasome in cell physiol. and pathol.
ST calpain proteasome differential inhibition peptidyl aldehyde; leucine peptide proteinase inhibitor neurite outgrowth
IT Nerve
(axon, outgrowth of, induction of by proteasome inhibitors; differential inhibition of calpain and proteasome activities by peptidyl aldehydes of di-leucine and tri-leucine)
IT 94367-21-2 133407-84-8 151275-87-5 152015-61-7
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(differential inhibition of calpain and proteasome activities by peptidyl aldehydes of di-leucine and tri-leucine)
IT 78990-62-2, Calpain 140879-24-9, Proteasome
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BIOL (Biological study); PROC (Process)
(differential inhibition of calpain and proteasome activities by peptidyl aldehydes of di-leucine and tri-leucine)

L7 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2002 ACS
AN 1994:502313 CAPLUS
DN 121:102313
TI Purification and characterization of an endogenous inhibitor specific to the Z-Leu-Leu-Leu-MCA degrading activity in proteasome and its identification as heat-shock protein 90
AU Tsubuki, Satoshi; Saito, Yumiko; Kawashima, Seiichi
CS Department of Molecular Biology, The Tokyo Metropolitan Institute of Medical Science, 3-18-22 Honkomagome, Bunkyo-ku, Tokyo, 113, Japan
SO FEBS Lett. (1994), 344(2-3), 229-33
CODEN: FEBLAL; ISSN: 0014-5793
DT Journal
LA English
CC 6-3 (General Biochemistry)
AB The authors previously identified a benzyloxycarbonyl(Z)-Leu-Leu-Leu-4-methylcoumaryl-7-amide (ZLLL-MCA) degrading activity in proteasome as a candidate for the regulator of neurite outgrowth. As its counterpart, the authors purified a protein from bovine brain that specifically inhibits the ZLLL-MCA degrading activity in proteasome. This protein is heat stable and has no effect on the other catalytic activities in proteasome, or on the activities of trypsin, chymotrypsin, or m- and .mu.-calpains either. The molar ratio of inhibitor-to-proteasome that inhibits 50% of the ZLLL-MCA degrading activity of proteasome is 1:1. The inhibitory mechanism of the inhibitor against proteasome is non-competitive. Finally, the inhibitor was identified as heat-shock protein 90 (HSP90) by partial amino acid sequencing and immunodetection. The results suggest that HSP90 initiates neurite outgrowth through the inhibition of the ZLLL-MCA degrading activity in proteasome.
ST proteasome tripeptide degrading activity inhibitor brain; heat shock protein 90 proteasome inhibitor; HSP90 inhibition tripeptide degrading activity proteasome
IT Brain
(heat-shock protein 90 of, purifn. and characterization of, inhibition of benzyloxycarbonyl-Leu-Leu-Leu-methylcoumarylamide degrading activity in proteasome in relation to)
IT Protein sequences
(of heat-shock protein 90 of brain, inhibition of benzyloxycarbonyl-Leu-Leu-Leu-methylcoumarylamide degrading activity in proteasome in relation to)
IT Phosphoproteins
RL: BIOL (Biological study)
(hsp 90, of brain, purifn. and characterization of, inhibition of benzyloxycarbonyl-Leu-Leu-Leu-methylcoumarylamide degrading activity in proteasome in relation to)
IT 140879-24-9P, Proteasome
RL: PREP (Preparation)
(benzyloxycarbonyl-Leu-Leu-Leu-methylcoumarylamide degrading activity in, inhibitor for, purifn. and characterization of and identification as heat-shock protein 90, of brain)
IT 152015-61-7
RL: BIOL (Biological study)
(proteasome with degrading activity for, heat-shock protein 90 as inhibitor of)

L7 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2002 ACS
AN 1994:48618 CAPLUS
DN 120:48618
TI Purification and characterization of Z-Leu-Leu-Leu-MCA degrading protease expected to regulate neurite formation: A novel catalytic activity in proteasome
AU Tsubuki, Satoshi; Kawasaki, Hiroshi; Saito, Yumiko; Miyashita, Namiko; Inomata, Mitsushi; Kawashima, Seiichi
CS Dep. Mol. Biol., Tokyo Metrop. Inst. Med. Sci., Tokyo, 113, Japan
SO Biochem. Biophys. Res. Commun. (1993), 196(3), 1195-201
CODEN: BBRCA9; ISSN: 0006-291X
DT Journal
LA English
CC 7-2 (Enzymes)
Section cross-reference(s): 13
AB A tripeptide aldehyde protease inhibitor, benzyloxycarbonyl (Z)-Leu-Leu-leucinal (ZLLLAl), initiates neurite outgrowth in PC12 cells at an optimal concn. of 30nM. This result suggests the existence of a protease which regulates neurite formation in PC12 cells. The authors report here an attempt to identify this target protease in bovine brain using Z-Leu-Leu-Leu-4-methylcoumaryl-7-amide (ZLLL-MCA), in which the aldehyde moiety of ZLLLal was changed to 4-methylcoumaryl-7-amide to serve as a substrate for the protease. As a result, the authors have purified a proteasome with a mol. wt. of about 660 kDa as a ZLLL-MCA degrading protease. The activity of the proteasome was inhibited efficiently by ZLLLal, and was different from known catalytic activities of proteasome in some aspects, suggesting it to be a novel one.

Thus, the proteasome may be involved in the regulation of neurite formation in PC12 cells.
ST brain proteasome tripeptide degrading proteinase; neurite development
proteasome tripeptide degrading proteinase
IT Nervous system
(development of, proteasome-dependent tripeptide deriv.-degrdn. protease function in)
IT Development, mammalian
(of nervous system, proteasome-dependent tripeptide deriv.-degrdn. protease function in)
IT Brain, composition
(tripeptide deriv.-degrdn. protease of proteasome of, purifn. and characterization of, neurite formation in relation to)
IT Nerve, metabolism
(axon, formation of, in PC12 cells, proteasome-dependent tripeptide
deriv.-degrdn. protease effect on)
IT 152015-61-7
RL: BIOL (Biological study)
(Proteasome-dependent protease of brain specificity for, neurite formation in relation to)
IT 133407-82-6
RL: BIOL (Biological study)
(proteasome-dependent protease inhibition by, neurite formation in relation to)
IT 140879-24-9P, Proteasome
RL: PREP (Preparation)
(tripeptide deriv.-degrading. protease dependent on, of brain, purifn.
and characterization of, neurite formation in relation to)

L7 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2002 ACS
AN 1992:609778 CAPLUS
DN 117:209778
TI Possible involvement of clathrin in neuritogenesis induced by a protease
inhibitor (benzyloxycarbonyl-Leu-Leu-Leu-aldehyde) in PC12 cells
AU Saito, Yumiko; Tsubuki, Satoshi; Ito, Hisashi; Ohmi-Imajo, Shinobu;
Kawashima, Seiichi
CS Dep. Enzyme Biochem., Tokyo Metrop. Inst. Gerontol., Tokyo, 173, Japan
SO J. Biochem. (Tokyo) (1992), 112(4), 448-55
CODEN: JOBIAO; ISSN: 0021-924X
DT Journal
LA English
CC 13-6 (Mammalian Biochemistry)
AB Previous reports showed that benzyloxycarbonyl (Z)-Leu-Leu-Leu-aldehyde
(ZLLLal) induces neurite outgrowth in PC12 cells, and that 33-, 35-, and
180-kDa proteins from PC12 cells elute specifically from a Leu-Leu-Leu-al
(LLLal)-coupled affinity column. Several lines of evidence suggest that
the 33-, 35-, and 180-kDa proteins are components of clathrin, well-known
for its role in endocytosis. Sepn. of clathrin into its heavy and light
chains showed that the clathrin heavy chains have the ability to bind to a
LLLal affinity column directly. Furthermore, ZLLLal enhances the rate of
polymn. of clathrin triskelion to the coat structure. **ZLLL**-COOH
does not cause neurite outgrowth in PC12 cells, and has no effect on the
rate of clathrin polymn. On immunocytochem. anal. of PC12 cells with an
anti-clathrin heavy chain antibody, enhanced staining of the clathrin
heavy chain was obsd. concomitantly with neurite outgrowth initiated by
ZLLLal, but not by NGF. This study provides new insights into both the
role of the clathrin mol. and the regulatory mechanism of neurite
outgrowth.
ST clathrin neurite outgrowth proteinase inhibitor
IT Clathrins
RL: BIOL (Biological study)
(proteinase inhibitor interaction with, in neurons, neurite outgrowth response to)
IT Nerve
(neurite, outgrowth of, proteinase inhibitor induction of, clathrin involvement in)
IT 133407-82-6
RL: BIOL (Biological study)
(neurite outgrowth in nerve cells induced by, clathrins involvement in)

L7 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2002 ACS
AN 1992:252916 CAPLUS
DN 116:252916
TI Isolation and characterization of possible target proteins responsible for
neurite outgrowth induced by a tripeptide aldehyde in PC12H cells
AU Saito, Yumiko; Tsubuki, Satoshi; Ito, Hisashi; Kawashima, Seiichi
CS Dep. Enzyme Biochem., Tokyo Metrop. Inst. Gerontol., Tokyo, 173, Japan
SO Biochem. Biophys. Res. Commun. (1992), 184(1), 419-26
CODEN: BBRCA9; ISSN: 0006-291X
DT Journal
LA English
CC 13-6 (Mammalian Biochemistry)
AB A tripeptide protease inhibitor, benzyloxycarbonyl-Leu-Leu-Leu-aldehyde
(ZLLLal), induces the outgrowth of 1 or 2 long neurites from PC12 cells.
Since this neurite outgrowth is different from that induced by nerve growth factor (NGF) in some aspects, the existence of a mol. that regulates neurite formation in PC12 cells was expected. To identify a target mol., Leu-Leu-Leu-aldehyde (LLLal) was immobilized as a ligand for
affinity chromatog. Proteins of 33-, 35-, and 180-kDa from the membrane
and cytoplasmic fractions of PC12 cells bound specifically to the affinity
column. **ZLLL**-COOH has no ability to induce neurite outgrowth, and the 33-kDa, 35-kDa, and 180-kDa proteins do not bind to an LLL-COOH
coupled affinity column. By using the LLLal-affinity column, the 33-kDa/35-kDa proteins were found to be converted to 36-kDa/38-kDa
proteins during brain development in rats. These results suggest that LLLal-binding proteins are involved in neuronal differentiation.
ST neurite outgrowth leucylleucylleucylaldehyde binding protein; nerve
differentiation leucylleucylleucylaldehyde binding protein
IT Nerve
(differentiation of, leucylleucylleucylaldehyde stimulation of, binding
proteins in relation to)
IT Membrane, biological
(leucylleucylleucylaldehyde-binding proteins assocn. with, of nerve)
IT Heart, composition
Muscle, composition
(leucylleucylleucylaldehyde-binding proteins of)
IT Development, mammalian
Embryo
(leucylleucylleucylaldehyde-binding proteins of brain in)
IT Brain, composition
(leucylleucylleucylaldehyde-binding proteins of, in ontogeny)
IT Proteins, specific or class
RL: BIOL (Biological study)
(leucylleucylleucylaldehyde-binding, 180,000-mol.-wt., of nerve, neurite outgrowth in relation to)
IT Proteins, specific or class
RL: BIOL (Biological study)
(leucylleucylleucylaldehyde-binding, 33,000-mol.-wt., of nerve,

neurite
outgrowth in relation to)
IT Proteins, specific or class
RL: BIOL (Biological study)
(leucylleucylleucylaldehyde-binding, 35,000-mol.-wt., of nerve, neurite
outgrowth in relation to)
IT Proteins, specific or class
RL: BIOL (Biological study)
(leucylleucylleucylaldehyde-binding, 36,000-mol.-wt., of brain in ontogeny)
IT Proteins, specific or class
RL: BIOL (Biological study)
(leucylleucylleucylaldehyde-binding, 38,000-mol.-wt., of brain in ontogeny)
IT Cell differentiation
(of nerve, leucylleucylleucylaldehyde stimulation of, binding proteins
in relation to)
IT Cytoplasm
(cytosol, leucylleucylleucylaldehyde-binding proteins of, of nerve)
IT Nerve
(neurite, outgrowth of, leucylleucylleucylaldehyde stimulation of, binding proteins in relation to)
IT 141607-20-7
RL: BIOL (Biological study)
(neurite outgrowth stimulation by, binding proteins in relation to)

=> s zlln
0 ZLLN
L8 0 ZLLN

=> s z-lln
317877 Z
44 LLN
L9 0 Z-LLN
(Z(W)LLN)

=> s ?leucinyl-l-norvalinal
102 ?LEUCINYL
1214675 L
15 NORVALINAL
L10 1 ?LEUCINYL-L-NORVALINAL
(?LEUCINYL(W)L(W)NORVALINAL)

=> d all

L10 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS
AN 1997:622103 CAPLUS
DN 127:305542
TI Detection of in vivo proteasome activity in a starfish oocyte using membrane-impermeant substrate
AU Chiba, Kazuyoshi; Sato, Eisuke; Hoshi, Motonori
CS Department of Life Science, Tokyo Institute of Technology, Yokohama, 226,
Japan
SO Journal of Biochemistry (Tokyo) (1997), 122(2), 286-293
CODEN: JOBIAO; ISSN: 0021-924X
PB Japanese Biochemical Society
DT Journal
LA English
CC 12-1 (Nonmammalian Biochemistry)
Section cross-reference(s): 7
AB A method was investigated for monitoring the activity of protease(s) in
cytosol of a single starfish oocyte using succinyl-Phe-Leu-Arg-coumarylamido-4-methanesulfonic acid as the substrate, which was injected
into the cell. After preincubation of immature oocytes with a proteasome
inhibitor, N-carbobenzoxy-L-leucinyl-L-**leucinyl-L-norvalinal**, the initial hydrolysis of the substrate was remarkably inhibited. The inhibitor blocked 1-methyl-adenine-triggered cyclin degrdn., which is known to be mediated by proteasome. However, calpain
inhibitor E-64 did not inhibit the hydrolysis of the substrate. These results suggested that the protease activity measured by this method is
mainly attributable to cytoplasmic proteasome. The hydrolysis of the substrate was partially inhibited by bestatin, suggesting that the substrate was cleaved by aminopeptidase. Thus, the initial velocity of
hydrolysis of the substrate (V0) by proteasome was assayed in a living
oocyte after preinjection of bestatin. The values of V0 increased gradually after 1-methyladenine addn. and reached the max. level at the
time corresponding to cyclin degrdn. The calcd. max. velocity of hydrolysis by a mature oocyte was approx. three times higher than that by
an immature oocyte. The Michaelis-Menten const. value was also higher in
mature than immature oocytes. These results suggest that proteasome-dependent proteolysis is regulated not only by ubiquitination
of substrates, as is generally believed, but also by the proteasome activity itself.
ST proteasome starfish oocyte maturation substrate
IT Cytoplasm
(cytosol; detection of in vivo proteasome activity in starfish oocyte using membrane-impermeant substrate)
IT Asteroidea
Oogenesis
(detection of in vivo proteasome activity in starfish oocyte using membrane-impermeant substrate)
IT Egg
(oocyte; detection of in vivo proteasome activity in starfish oocyte using membrane-impermeant substrate)
IT 140879-24-9, Multicatalytic proteinase
RL: ANT (Analyte); BAC (Biological activity or effector, except adverse);
BPR (Biological process); BSU (Biological study, unclassified); ANST
(Analytical study); BIOL (Biological study); PROC (Process)
(detection of in vivo proteasome activity in starfish oocyte using membrane-impermeant substrate)
IT 197305-52-5
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(detection of in vivo proteasome activity in starfish oocyte using membrane-impermeant substrate)

=> leucinyl?norval?
LEUCINYL?NORVAL? IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system. For a list of commands available to you in the current file, enter "HELP COMMANDS" at an arrow prompt (=>).

=> s leucinyl?norval?
'?' TRUNCATION SYMBOL NOT VALID WITHIN 'LEUCINYL?NORVAL?'
The truncation symbol ? may be used only at the end of a search term. To specify a variable character within a word use '!', e.g., 'wom!n' to search for both 'woman' and 'women'. Enter "HELP TRUNCATION" at an arrow prompt (=>) for more information.

=> s leucinyl-l-norval?
79 LEUCINYL
1214675 L
2227 NORVAL?
L11 1 LEUCINYL-L-NORVAL?
(LEUCINYL(W)L(W)NORVAL?)

=> s leucinyl(w)norval?
79 LEUCINYL

2227 NORVAL?
L12 2 LEUCINYL(W)NORVAL?

=> d ti 1-2

L12 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS
TI Selective inhibitors of the proteasome-dependent and vacuolar pathways of
protein degradation in Saccharomyces cerevisiae

L12 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2002 ACS
TI Ubiquitin-proteasome pathway mediated intracellular degradation of apolipoprotein B

=> d all 1-2

L12 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS
AN 1996:681511 CAPLUS
DN 125:322631
TI Selective inhibitors of the proteasome-dependent and vacuolar pathways of
protein degradation in Saccharomyces cerevisiae
AU Lee, Do Hee; Goldberg, Alfred L.
CS Dep. Cell Biol., Harvard Med. Sch., Boston, MA, 02115, USA
SO J. Biol. Chem. (1996), 271(44), 27280-27284
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English
CC 10-2 (Microbial, Algal, and Fungal Biochemistry)
AB We have studied whether various agents that inhibit purified yeast and
mammalian 26 S proteasome can suppress the breakdown of different classes
of proteins in Saccharomyces cerevisiae. The degrdn. of short-lived proteins was inhibited reversibly by peptide aldehyde inhibitors of proteasomes, carbobenzoxyl-leucinyl-leucinyl-leucinal (MG132) and carbobenzoxyl-leucinyl-**leucinyl-norvalinal** (MG115), in
a yeast mutant with enhanced permeability, but not in wild-type strains.
Lactacystin, an irreversible proteasome inhibitor, had no effect, but the
.beta.-lactone deriv. of lactacystin, which directly reacts with proteasomes, inhibited the degrdn. of short-lived proteins. These inhibitors also blocked the rapid ubiquitin-dependent breakdown of a .beta.-galactosidase fusion protein and caused accumulation of enzymically
active mols. in cells. The degrdn. of the bulk of cell proteins, which are long-lived mols., was not blocked by proteasome inhibitors, but could
be blocked by phenylmethylsulfonyl fluoride. This agent, which inhibits
multiple vacuolar proteases, did not affect the proteasome or breakdown of
short-lived proteins. These two classes of inhibitors can thus be used to
distinguish the cytosolic and vacuolar proteolytic pathways and to increase the cellular content of short-lived proteins.
ST proteasome vacuole protease inhibitor Saccharomyces proteolysis
IT Saccharomyces cerevisiae
(selective inhibitors of the proteasome-dependent and vacuolar pathways
of protein degrdn. in Saccharomyces cerevisiae)
IT Proteins, specific or class
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(abnormal, selective inhibitors of the proteasome-dependent and vacuolar pathways of protein degrdn. in Saccharomyces cerevisiae)
IT Proteins, specific or class
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(long-lived, selective inhibitors of the proteasome-dependent and vacuolar pathways of protein degrdn. in Saccharomyces cerevisiae)
IT Biological transport
(permeation, differential effect of proteasome inhibitors on Saccharomyces cerevisiae wild-type and mutant strains in relation to)
IT Proteins, specific or class
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(short-lived, selective inhibitors of the proteasome-dependent and vacuolar pathways of protein degrdn. in Saccharomyces cerevisiae)
IT Organelle
(vacuole, selective inhibitors of the proteasome-dependent and vacuolar
pathways of protein degrdn. in Saccharomyces cerevisiae)
IT 140879-24-9, Proteasome
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(26 S; selective inhibitors of the proteasome-dependent and vacuolar
pathways of protein degrdn. in Saccharomyces cerevisiae)
IT 329-98-6, Phenylmethylsulfonyl fluoride. 60267-61-0, Ubiquitin 133343-34-7, Lactacystin 133407-82-6 133407-86-0, MG115 154226-60-5
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(selective inhibitors of the proteasome-dependent and vacuolar pathways
of protein degrdn. in Saccharomyces cerevisiae)
IT 37259-58-8, Serine proteinase
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(selective inhibitors of the proteasome-dependent and vacuolar pathways
of protein degrdn. in Saccharomyces cerevisiae)

L12 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2002 ACS
AN 1996:607542 CAPLUS
DN 125:241026
TI Ubiquitin-proteasome pathway mediated intracellular degradation of apolipoprotein B
AU Yeung, S. Jim; Chen, San Hwan; Chan, Lawrence
CS Department of Medicine, Baylor College of Medicine, Houston, TX, 77030,
USA
SO Biochemistry (1996), 35(43), 13843-13848
CODEN: BICHAW; ISSN: 0006-2960
DT Journal
LA English
CC 6-1 (General Biochemistry)
AB Newly synthesized apolipoprotein B (apoB) is degraded by a proteolytic
process in the pre-Golgi compartment that can be inhibited by N-acetyl-L-leucinyl-L-leucinyl-L-norleucinal (ALLN) but not by several
other protease inhibitors. We have tested the hypothesis that the ubiquitin-proteasome pathway is involved in the intracellular degrdn. of
apoB in liver cells. Inhibitors of proteasomes blocked the degrdn. of apoB in cultured human hepatoma (HepG2) cells. Protein degrdn. by proteasomes is ATP-dependent, and ATP depletion by dinitrophenol and
2-deoxyglucose also inhibited apoB degrdn. in these cells. Furthermore,
the intracellular human apoB isolated by immunopptn. was shown to react
specifically with anti-ubiquitin antibody by immunoblotting. This result
was corroborated by sequential immunopptn. of [35S]methionine-labeled
proteins by anti-human apoB and anti-ubiquitin antisera. In contrast, secreted apoB was not ubiquitinated. The amt. of intracellular ubiquitinated apoB was increased by the proteasome inhibitors, ALLN and
carbobenzoxyl-leucinyl-**leucinyl-norvalinal**-H (MG115).
Our findings suggest that the ubiquitin-proteasome pathway is one mechanism for the intracellular degrdn. of apoB.

ST apolipoprotein B degrdn liver ubiquitin proteasome
IT Liver
(ubiquitin-proteasome pathway mediated intracellular degrdn. of apolipoprotein B in liver cell)
IT Lipoproteins
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(apo-, B, ubiquitin-proteasome pathway mediated intracellular degrdn.
of apolipoprotein B)
IT 60267-61-0, Ubiquitin 140879-24-9, Proteasome
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(ubiquitin-proteasome pathway mediated intracellular degrdn. of apolipoprotein B)

=> s ?norvalinal
L13 16 ?NORVALINAL

=> d ti

L13 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2002 ACS
TI Role of proteasomal degradation in the cell cycle-dependent regulation of
DNA topoisomerase II.alpha. expression

=> file registry
COST IN U.S. DOLLARS SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST 56.84 101.85

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SINCE FILE TOTAL
ENTRY SESSION
CA SUBSCRIBER PRICE -6.20 -9.92

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for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> E "?NORVALINAL"/CN 25
E1 1 ?? (PSEUDOMONAS STRAIN S-47 CLONE PCSP21 GENE XYLL)/CN
E2 1 ?H-CYCLOHEPTA(C)FURAN/CN
E3 0 --> ?NORVALINAL/CN
E4 1 A/CN
E5 1 A (EC:5.99.1.-) (RICKETTSIA CONORI STRAIN MALISH 7 GENE PARC)/CN
E6 1 A / G SPECIFIC ADENINE GLYCOSYLASE (PSEUDOMONAS AERUGINOSA STRAIN PAO1 GENE MUTY)/CN
E7 1 A 0/CN
E8 1 A 0 (POLYAMIDE)/CN
E9 1 A 002/CN
E10 1 A 002 (POLYOL)/CN
E11 1 A 002 (POLYOL), POLYMER WITH B 002 (ISOCYANATE)/CN
E12 2 A 007/CN
E13 1 A 007 (URETHANE)/CN
E14 1 A 008/CN
E15 1 A 0089/CN
E16 2 A 01/CN
E17 1 A 01 (ADHESIVE)/CN
E18 1 A 01 (DYE AUXILIARY)/CN
E19 1 A 0111/CN
E20 1 A 013/CN
E21 1 A 01H/CN
E22 1 A 01L/CN
E23 1 A 01M/CN
E24 1 A 02011-1/CN
E25 1 A 02056/CN

=> file medline biosis caplus
COST IN U.S. DOLLARS SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST 0.38 102.23

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)
SINCE FILE TOTAL
ENTRY SESSION
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=> s ?norvalinal?
L14 71 ?NORVALINAL?

=> dup rem l14
PROCESSING COMPLETED FOR L14
L15 40 DUP REM L14 (31 DUPLICATES REMOVED)

=> s ?leucinal?
L16 1235 ?LEUCINAL?

=> s ?aav?
'?AAV?' NOT LONG ENOUGH FOR LEFT TRUNCATION
'?AAV?' NOT LONG ENOUGH FOR LEFT TRUNCATION
'?AAV?' NOT LONG ENOUGH FOR LEFT TRUNCATION
You have entered a truncated stem whose length is less than the minimum allowed for left truncation in the requested search field. You may increase the length of the stem to the minimum allowed and try again. Enter HELP SFIELDS to to find the minimum stem length for left truncation in the requested search field.

=> s adeno-associated
L17 5751 ADENO-ASSOCIATED

=> s l16 and l17
L18 0 L16 AND L17

=> s l15 and l17
L19 0 L15 AND L17

=> log hold
COST IN U.S. DOLLARS SINCE FILE TOTAL

ENTRY SESSION
FULL ESTIMATED COST 8.12 110.35

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SINCE FILE TOTAL
ENTRY SESSION
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frequency
NEWS 5 Feb 19 Access via Tymnet and SprintNet Eliminated Effective 3/31/02
NEWS 6 Mar 08 Gene Names now available in BIOSIS
NEWS 7 Mar 22 TOXLIT no longer available
NEWS 8 Mar 22 TRCTHERMO no longer available
NEWS 9 Mar 28 US Provisional Priorities searched with P in CA/CAplus
and USPATFULL
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NEWS 18 Apr 22 Federal Research in Progress (FEDRIP) now available
NEWS 19 Jun 03 New e-mail delivery for search results now available
NEWS 20 Jun 10 MEDLINE Reload
NEWS 21 Jun 10 PCTFULL has been reloaded

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=>
=> file medline biosis caplus
COST IN U.S. DOLLARS SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST 0.21 0.21

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=> s adeno-associated
L1 5751 ADENO-ASSOCIATED

=> s liver
L2 1438993 LIVER

=> s l1(s)l2
L3 195 L1(S) L2

=> s l3 not py>1999
L4 87 L3 NOT PY>1999

=> dup rem l4
PROCESSING COMPLETED FOR L4
L5 47 DUP REM L4 (40 DUPLICATES REMOVED)

=> d ti so 30-47

L5 ANSWER 30 OF 47 MEDLINE DUPLICATE 21
TI Tissue-specific expression of herpes simplex virus thymidine kinase gene
delivered by adeno-associated virus inhibits the growth of human hepatocellular carcinoma in athymic mice.
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF
AMERICA, (1997 Dec 9) 94 (25) 13891-6.
Journal code: 7505876. ISSN: 0027-8424.

L5 ANSWER 31 OF 47 MEDLINE DUPLICATE 22
TI Persistent expression of human clotting factor IX from mouse **liver** after intravenous injection of **adeno-associated** virus vectors.
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF
AMERICA, (1997 Feb 18) 94 (4) 1426-31.
Journal code: 7505876. ISSN: 0027-8424.

L5 ANSWER 32 OF 47 CAPLUS COPYRIGHT 2002 ACS
TI Defective adenoassociated viral-mediated transfection of insulin

gene by
direct injection into liver parenchyma decreases blood glucose of diabetic
mice
SO Hormone and Metabolic Research (1997), 29(12), 599-603
CODEN: HMMRA2; ISSN: 0018-5043

L5 ANSWER 33 OF 47 CAPLUS COPYRIGHT 2002 ACS
TI Gene therapy strategies for genetic diseases
SO Studies in Stomatology and Craniofacial Biology (1997), 559-585.
Editor(s): Cohen, M. Michael, Jr.; Baum, Bruce J. Publisher: IOS Press,
Amsterdam, Neth.
CODEN: 64SKAK

L5 ANSWER 34 OF 47 MEDLINE DUPLICATE 23
TI Persistent and therapeutic concentrations of human factor IX in mice after
hepatic gene transfer of recombinant AAV vectors.
SO NATURE GENETICS, (1997 Jul) 16 (3) 270-6.
Journal code: 9216904. ISSN: 1061-4036.

L5 ANSWER 35 OF 47 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Persistent expression to human coagulation Factor IX following
administration of AAV vectors to mouse muscle and liver.
SO Blood, (Nov. 15, 1997) Vol. 90, No. 10 SUPPL. 1 PART 1, pp. 240A.
Meeting Info.: 39th Annual Meeting of the American Society of Hematology
San Diego, California, USA December 5-9, 1997 The American Society of
Hematology
. ISSN: 0006-4971.

L5 ANSWER 36 OF 47 MEDLINE DUPLICATE 24
TI Adeno-associated virus 2-mediated gene transfer in vivo: organ-tropism and
expression of transduced sequences in mice.
SO GENE, (1997 Apr 29) 190 (1) 203-10.
Journal code: 7706761. ISSN: 0378-1119.

L5 ANSWER 37 OF 47 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI **Adeno-associated** virus (AAV) as a gene delivery vector
for **liver**-cells.
SO Hepatology, (1997) Vol. 26, No. 4 PART 2, pp. 197A.
Meeting Info.: 48th Annual Meeting of the American Association for the
Study of Liver Diseases Chicago, Illinois, USA November 7-11, 1997
ISSN: 0270-9139.

L5 ANSWER 38 OF 47 CAPLUS COPYRIGHT 2002 ACS
TI Use of a non-mammalian DNA virus to express an exogenous gene in a
mammalian cell for gene therapy in treatment of gene deficiency disorder
or liver cancer
SO PCT Int. Appl., 77 pp.
CODEN: PIXXD2

L5 ANSWER 39 OF 47 MEDLINE DUPLICATE 25
TI Transduction with recombinant adeno-associated virus for gene therapy is
limited by leading-strand synthesis.
SO JOURNAL OF VIROLOGY, (1996 Jan) 70 (1) 520-32.
Journal code: 0113724. ISSN: 0022-538X.

L5 ANSWER 40 OF 47 MEDLINE
TI Selective killing of AFP-positive hepatocellular carcinoma cells by adeno-associated virus transfer of the herpes simplex virus thymidine kinase gene.
SO HUMAN GENE THERAPY, (1996 Mar 1) 7 (4) 463-70.
Journal code: 9008950. ISSN: 1043-0342.

L5 ANSWER 41 OF 47 MEDLINE DUPLICATE 26
TI Autonomous parvovirus transduction of a gene under control of tissue-specific or inducible promoters.
SO GENE THERAPY, (1996 Jan) 3 (1) 28-36.
Journal code: 9421525. ISSN: 0969-7128.

L5 ANSWER 42 OF 47 MEDLINE
TI Drug management of noninfective complications of cystic fibrosis.
SO DRUGS, (1995 Oct) 50 (4) 626-35. Ref: 40
Journal code: 7600076. ISSN: 0012-6667.

L5 ANSWER 43 OF 47 MEDLINE
TI Gene transfer to the thymus. A means of abrogating the immune response to
recombinant adenovirus.
SO ANNALS OF SURGERY, (1995 Sep) 222 (3) 229-39; discussion 239-42.
Journal code: 0372354. ISSN: 0003-4932.

L5 ANSWER 44 OF 47 MEDLINE DUPLICATE 27
TI [Experimental infection of green monkeys with adenoassociated virus].
Eksperimental'naia infektsiia zelenykh martyshek adenoassotsiirovannym
virusom.
SO VOPROSY VIRUSOLOGII, (1981 Jan-Feb) (1) 82-9.
Journal code: 0417337. ISSN: 0507-4088.

L5 ANSWER 45 OF 47 MEDLINE DUPLICATE 28
TI [Antigens of adeno-associated viruses in children dying from acute respiratory disease].
Antigeny adenoassotsiirovannykh virusov u detei, umershikh ot ostrogo
respiratornogo zabolevaniia.
SO VOPROSY VIRUSOLOGII, (1977) (1) 82-7.
Journal code: 0417337. ISSN: 0507-4088.

L5 ANSWER 46 OF 47 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI SOME PROPERTIES OF AVIAN ADENOVIRUSES ISOLATED FROM CHICKENS WITH
INCLUSION BODY HEPATITIS IN JAPAN.
SO AVIAN DIS, (1976) 20 (4), 693-705.
CODEN: AVDIAI. ISSN: 0005-2086.

L5 ANSWER 47 OF 47 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI GROWTH OF ADENO ASSOCIATED SATELLITE VIRUS IN DOGS IN THE PRESENCE OF
INFECTIOUS CANINE HEPATITIS VIRUS.
SO JPN J VET RES, (1975) 23 (3), 95-100.
CODEN: JJVRAE. ISSN: 0047-1917.

=> s transgene
L6 39542 TRANSGENE

=> d his

(FILE 'HOME' ENTERED AT 14:28:55 ON 19 JUN 2002)

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 14:29:05 ON 19 JUN 2002
L1 5751 S ADENO-ASSOCIATED
L2 1438993 S LIVER
L3 195 S L1(S)L2
L4 87 S L3 NOT PY>1999
L5 47 DUP REM L4 (40 DUPLICATES REMOVED)
L6 39542 S TRANSGENE

=> s l6 and l5
L7 12 L6 AND L5

=> d ti so 1-12

L7 ANSWER 1 OF 12 MEDLINE
TI Selective uptake and sustained expression of AAV vectors following subcutaneous delivery.
SO JOURNAL OF GENE MEDICINE, (1999 Jan-Feb) 1 (1) 31-42.
Journal code: 9815764. ISSN: 1099-498X.

L7 ANSWER 2 OF 12 MEDLINE
TI Gene transfer into the CNS using recombinant adeno-associated virus:
analysis of vector DNA forms resulting in sustained expression.
SO JOURNAL OF DRUG TARGETING, (1999 Dec) 7 (4) 269-83.
Journal code: 9312476. ISSN: 1061-186X.

L7 ANSWER 3 OF 12 MEDLINE
TI Intravenous angiotensinogen antisense in AAV-based vector decreases
hypertension.
SO AMERICAN JOURNAL OF PHYSIOLOGY, (1999 Dec) 277 (6 Pt 2) H2392-9.
Journal code: 0370511. ISSN: 0002-9513.

L7 ANSWER 4 OF 12 MEDLINE
TI Isolation of recombinant **adeno-associated** virus
vector-cellular DNA junctions from mouse **liver**.
SO JOURNAL OF VIROLOGY, (1999 Jul) 73 (7) 5438-47.
Journal code: 0113724. ISSN: 0022-538X.

L7 ANSWER 5 OF 12 MEDLINE
TI Liver-directed gene transfer vectors.
SO HUMAN GENE THERAPY, (1998 Sep 20) 9 (14) 1975-81. Ref: 96
Journal code: 9008950. ISSN: 1043-0342.

L7 ANSWER 6 OF 12 MEDLINE
TI **Adeno-associated** viral vector-mediated gene transfer
of human blood coagulation factor IX into mouse **liver**.
SO BLOOD, (1998 Jun 15) 91 (12) 4600-7.
Journal code: 7603509. ISSN: 0006-4971.

L7 ANSWER 7 OF 12 MEDLINE
TI Transient immunosuppression allows **transgene** expression
following readministration of adeno-associated viral vectors.
SO HUMAN GENE THERAPY, (1998 Mar 1) 9 (4) 477-85.
Journal code: 9008950. ISSN: 1043-0342.

L7 ANSWER 8 OF 12 MEDLINE
TI Adeno-associated virus type 2-mediated gene transfer: correlation of tyrosine phosphorylation of the cellular single-stranded D sequence-binding protein with **transgene** expression in human cells in vitro and murine tissues in vivo.
SO JOURNAL OF VIROLOGY, (1998 Feb) 72 (2) 1593-9.
Journal code: 0113724. ISSN: 0022-538X.

L7 ANSWER 9 OF 12 MEDLINE
TI Gene transfer to the thymus. A means of abrogating the immune response to
recombinant adenovirus.
SO ANNALS OF SURGERY, (1995 Sep) 222 (3) 229-39; discussion 239-42.
Journal code: 0372354. ISSN: 0003-4932.

L7 ANSWER 10 OF 12 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Human **liver** cell-specific **transgene** expression
mediated by recombinant **adeno-associated** virus 2
vectors.
SO Blood, (Nov. 15, 1998) Vol. 92, No. 10 SUPPL. 1 PART 1-2, pp. 149A.
Meeting Info.: 40th Annual Meeting of the American Society of Hematology
Miami Beach, Florida, USA December 4-8, 1998 The American Society of
Heamatology
. ISSN: 0006-4971.

L7 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2002 ACS
TI Development of animal models for adeno-associated virus site-specific
integration
SO Journal of Virology (1999), 73(3), 2517-2526
CODEN: JOVIAM; ISSN: 0022-538X

L7 ANSWER 12 OF 12 CAPLUS COPYRIGHT 2002 ACS
TI The kinetics of rAAV integration in the liver
SO Nature Genetics (1998), 19(1), 13-15
CODEN: NGENEC; ISSN: 1061-4036

=> s edta
L8 122109 EDTA

=> sl1 and l8
SL1 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s l1 and l8
L9 7 L1 AND L8

=> dup rem l9
PROCESSING COMPLETED FOR L9
L10 5 DUP REM L9 (2 DUPLICATES REMOVED)

=> d ti so 1-5

L10 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2002 ACS
TI Method of inducing an immunological CTL response by lymphatic system
delivery of peptide vaccine
SO U.S. Pat. Appl. Publ., 48 pp., Cont.-in-part of U. S. Ser. No. 380,534.
CODEN: USXXCO

L10 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2002 ACS
TI Method of treating cells of the prostate prophylactically or therapeutically with a nucleic acid
SO PCT Int. Appl., 35 pp.
CODEN: PIXXD2

L10 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2002 ACS
TI Methods and compositions for increasing infectivity of retrovirus vectors
to epithelial tissues and treatment of epithelial disorders
SO Jpn. Kokai Tokkyo Koho, 113 pp.
CODEN: JKXXAF

L10 ANSWER 4 OF 5 MEDLINE DUPLICATE 1
TI AlphaVbeta5 integrin: a co-receptor for **adeno-associated** virus type 2 infection.
SO NATURE MEDICINE, (1999 Jan) 5 (1) 78-82.
Journal code: 9502015. ISSN: 1078-8956.

L10 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2002 ACS
TI Complementation of **adeno-associated** virus by
temperature-sensitive mutants of human adenovirus and herpesvirus
SO Replication Mamm. Parvoviruses (1978), 109-18. Editor(s): Ward, David C.;
Tattersall, Peter. Publisher: Cold Spring Harbor Lab., Cold Spring Harbor,
N. Y.
CODEN: 38WXA6

=> d ibib ab l7 7,6

L7 ANSWER 7 OF 12 MEDLINE
ACCESSION NUMBER: 1998184221 MEDLINE
DOCUMENT NUMBER: 98184221 PubMed ID: 9525309
TITLE: Transient immunosuppression allows **transgene** expression following readministration of adeno-associated viral vectors.
AUTHOR: Manning W C; Zhou S; Bland M P; Escobedo J A; Dwarki V
CORPORATE SOURCE: Chiron Corporation, Emeryville, CA 94608, USA.
SOURCE: HUMAN GENE THERAPY, (1998 Mar 1) 9 (4) 477-85.
Journal code: 9008950. ISSN: 1043-0342.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199804
ENTRY DATE: Entered STN: 19980507
Last Updated on STN: 19980507
Entered Medline: 19980429

AB **Adeno-associated** viral (AAV) vectors have much promise in gene therapy. Among the many properties that make AAV an ideal vector for gene therapy are its ability to infect both dividing and nondividing cells and the longevity of expression in tissues such as brain, skeletal muscle, and **liver**. However, like other viral vectors, readministration of vector is limited because of the host's immune response to viral components of the vector. Using class I, class II, and CD40 ligand (CD40L)-deficient mice, we demonstrate that neutralizing antibodies to the viral capsid proteins prevent **transgene** expression following readministration of rAAV vectors. Transient immunosuppression of mice by treatment with antibody to CD4 at the time of primary infection allowed **transgene** expression after readministration of rAAV vectors to animals. Transient immunosuppression with antibody to CD40L had only a modest effect on the efficacy of readministration. The ability to readminister virus was inversely correlated with both AAV capsid enzyme-linked immunosorbent assay titers and AAV neutralizing antibody titers. These studies demonstrate that readministration of rAAV can be accomplished by down regulating the anti-AAV immune response and suggest the use of repeated administration of rAAV as a viable form of therapy for the treatment of chronic diseases.

L7 ANSWER 6 OF 12 MEDLINE
ACCESSION NUMBER: 1998282203 MEDLINE
DOCUMENT NUMBER: 98282203 PubMed ID: 9616156
TITLE: **Adeno-associated** viral vector-mediated gene transfer of human blood coagulation factor IX into mouse **liver**.
AUTHOR: Nakai H; Herzog R W; Hagstrom J N; Walter J; Kung S H; Yang E Y; Tai S J; Iwaki Y; Kurtzman G J; Fisher K J; Colosi P; Couto L B; High K A
CORPORATE SOURCE: Avigen, Inc, Alameda, CA, USA.
CONTRACT NUMBER: P50 HL54500 (NHLBI)
R01 HL53668 (NHLBI)
SOURCE: BLOOD, (1998 Jun 15) 91 (12) 4600-7.
Journal code: 7603509. ISSN: 0006-4971.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199806
ENTRY DATE: Entered STN: 19980713
Last Updated on STN: 19980713
Entered Medline: 19980630

AB Recombinant **adeno-associated** virus vectors (AAV) were prepared in high titer (10(12) to 10(13) particles/mL) for the expression of human factor IX after in vivo transduction of murine hepatocytes. Injection of AAV-CMV-F.IX (expression from the human cytomegalovirus IE enhancer/promoter) into the portal vein of adult mice resulted in no detectable human factor IX in plasma, but in mice injected intravenously as newborns with the same vector, expression was initially 55 to 110 ng/mL. The expression in the **liver** was mostly transient, and plasma levels decreased to undetectable levels within 5 weeks. However, long-term expression of human F.IX was detected by immunofluorescence staining in 0.25% of hepatocytes 8 to 10 months postinjection. The loss of expression was likely caused by suppression of the CMV promoter, because polymerase chain reaction data showed no substantial loss of vector DNA in mouse **liver**. A second vector in which F.IX expression was controlled by the human EF1alpha promoter was constructed and injected into the portal vein of adult C57BL/6 mice at a dose of 6.3 x 10(10) particles. This resulted in therapeutic plasma levels (200 to 320 ng/mL) for a period of at least 6 months, whereas no human F.IX was detected in plasma of mice injected with AAV-CMV-F.IX. Doses of AAV-EF1alpha-F. IX of 2.7 x 10(11) particles resulted in plasma levels of 700 to 3, 200 ng/mL. **Liver**-derived expression of human F.IX from the AAV-EF1alpha-F.IX vector was confirmed by immunofluorescence staining. We conclude that recombinant AAV can efficiently transduce hepatocytes and direct stable expression of an F.IX **transgene** in mouse **liver**, but sustained expression is critically dependent on the choice of promoter.

=> d ibib ab l10 3

L10 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:344459 CAPLUS
DOCUMENT NUMBER: 132:343324
TITLE: Methods and compositions for increasing infectivity of retrovirus vectors to epithelial tissues and treatment of epithelial disorders
INVENTOR(S): Maclay, Paul B., Jr.; Wang, Goshan; Davidson, Billy; Bottner, Martykay; Herman, Steve M.; Jolly, Douglas J.
PATENT ASSIGNEE(S): The University of Iowa Research Foundation, USA; Chiron Corp.
SOURCE: Jpn. Kokai Tokkyo Koho, 113 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000143548	A2	20000523	JP 1998-325721	19981116

AB Susceptibility of epithelial cells to viral infection, e.g. to retroviral vectors for gene therapy, is increased by contacting epithelial cells with a tissue-permeabilizing agents such as a hypotonic soln., ion

chelators,
cationic peptides, occludin peptide, cytoskeletal disruption agents, neurotransmitters, oxidants, inflammatory mediators, etc. The process
also contains a step for proliferating the epithelial cell, e.g. by treatment with growth factors. Aerosol compns. contg. tissue-permeabilizing agents and cell growth factors are used for achieving the method. Also claimed are methods for treatment of epithelial disorders, e.g. lung cancer, bronchial cancer, asthma, surfactant protein B deficiency, .alpha.1-antitrypsin deficiency, or cystic fibrosis using the method before contacting the tissues with viral
vectors.

=> d his

(FILE 'HOME' ENTERED AT 14:28:55 ON 19 JUN 2002)

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 14:29:05 ON 19 JUN 2002
L1 5751 S ADENO-ASSOCIATED
L2 1438993 S LIVER
L3 195 S L1(S)L2
L4 87 S L3 NOT PY>1999
L5 47 DUP REM L4 (40 DUPLICATES REMOVED)
L6 39542 S TRANSGENE
L7 12 S L6 AND L5
L8 122109 S EDTA
L9 7 S L1 AND L8
L10 5 DUP REM L9 (2 DUPLICATES REMOVED)

=> s dog
L11 594168 DOG

=> s l1(s)l11
L12 48 L1(S) L11

=> dup rem l12
PROCESSING COMPLETED FOR L12
L13 31 DUP REM L12 (17 DUPLICATES REMOVED)

=> s l13 not py>1999
L14 10 L13 NOT PY>1999

=> d l13 1-10

L13 ANSWER 1 OF 31 MEDLINE DUPLICATE 1
AN 2002210650 MEDLINE
DN 21926810 PubMed ID: 11929752
TI Sustained phenotypic correction of hemophilia B dogs with a factor IX null
mutation by liver-directed gene therapy.
AU Mount Jane D; Herzog Roland W; Tillson D Michael; Goodman Susan A;
Robinson Nancy; McCleland Mark L; Bellinger Dwight; Nichols Timothy C;
Arruda Valder R; Lothrop Clinton D Jr; High Katherine A
CS Scott-Ritchey Research Center and Department of Clinical Sciences, College
of Veterinary Sciences, Auburn University, AL, USA.
NC R01 HL61921 (NHLBI)
SO BLOOD, (2002 Apr 15) 99 (8) 2670-6.
Journal code: 7603509. ISSN: 0006-4971.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 200206
ED Entered STN: 20020412
Last Updated on STN: 20020618
Entered Medline: 20020617

L13 ANSWER 2 OF 31 MEDLINE
AN 2002316209 IN-PROCESS
DN 22054319 PubMed ID: 12058500
TI [In Process Citation].
Fortschritte in der somatischen Gentherapie von Netzhautdegenerationen am
Tiermodell.
AU Schlichtenbrede F C; Sarra G M; Ali R R; Wiedemann P; Reichel M B
CS Klinik und Poliklinik fur Augenheilkunde, Universitat Leipzig.
SO OPHTHALMOLOGE, (2002 Apr) 99 (4) 259-65.
Journal code: 9206148. ISSN: 0941-293X.
CY Germany: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA German
FS IN-PROCESS; NONINDEXED; Priority Journals
ED Entered STN: 20020613
Last Updated on STN: 20020613

L13 ANSWER 3 OF 31 MEDLINE
AN 2001574004 MEDLINE
DN 21538077 PubMed ID: 11681005
TI Possibility and future problems of gene therapy for gastric cancer.
AU Matsukura N; Onda M; Shimada T
CS First Department of Surgery, Nippon Medical School, Tokyo, Japan.
SO NIPPON GEKA GAKKAI ZASSHI. JOURNAL OF JAPAN SURGICAL SOCIETY, (2001 Oct)
102 (10) 778-82.
Journal code: 0405405. ISSN: 0301-4894.
CY Japan
DT Journal; Article; (JOURNAL ARTICLE)
LA Japanese
FS Priority Journals
EM 200112
ED Entered STN: 20011030
Last Updated on STN: 20020123
Entered Medline: 20011207

L13 ANSWER 4 OF 31 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2002:220520 BIOSIS
DN PREV200200220520
TI Induction of immunological tolerance to a coagulation factor antigen by
hepatic gene transfer.
AU Mingozzi, Federico (1); Arruda, Valder R. (1); Liu, Yi-Lin (1); Wang,
YuQuin (1); Liu, Jian Hua (1); Kaufhold, Antje (1); High, Katherine A.
(1); Herzog, Roland W. (1)
CS (1) Pediatrics and Pathology, Childrens Hospital of Philadelphia and
University of Pennsylvania Medical Center, Philadelphia, PA USA
SO Blood, (November 16, 2001) Vol. 98, No. 11 Part 1, pp. 694a.
http://www.bloodjournal.org/. print.
Meeting Info.: 43rd Annual Meeting of the American Society of Hematology,
Part 1 Orlando, Florida, USA December 07-11, 2001
ISSN: 0006-4971.
DT Conference
LA English

L13 ANSWER 5 OF 31 MEDLINE
AN 2001557795 MEDLINE
DN 21489918 PubMed ID: 11604045
TI Gene therapy for muscular dystrophies: current status and future prospects.
AU Takeda S; Miyagoe-Suzuki Y
CS Department of Molecular Therapy, National Institute of Neuroscience,
National Center of Neurology and Psychiatry, Tokyo, Japan..
takeda@ncnp@go.jp
SO BioDrugs, (2001) 15 (10) 635-44. Ref: 50
Journal code: 9705305. ISSN: 1173-8804.

CY New Zealand
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW LITERATURE)
LA English
FS Priority Journals
EM 200112
ED Entered STN: 20011018
Last Updated on STN: 20020122
Entered Medline: 20011227

L13 ANSWER 6 OF 31 MEDLINE DUPLICATE 2
AN 2001692519 MEDLINE
DN 21602945 PubMed ID: 11735343
TI Lack of germline transmission of vector sequences following systemic
administration of recombinant AAV-2 vector in males.
AU Arruda V R; Fields P A; Milner R; Wainwright L; De Miguel M P; Donovan P
J; Herzog R W; Nichols T C; Biegel J A; Razavi M; Dake M; Huff D; Flake A
W; Couto L; Kay M A; High K A
CS The Children's Hospital of Philadelphia, and Department of Pediatrics,
University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania
19104, USA.
NC HL64274 (NHLBI)
P01 HL64190 (NHLBI)
SO MOLECULAR THERAPY, (2001 Dec) 4 (6) 586-92.
Journal code: 100890581. ISSN: 1525-0016.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200202
ED Entered STN: 20011213
Last Updated on STN: 20020207
Entered Medline: 20020206

L13 ANSWER 7 OF 31 MEDLINE
AN 2001495995 MEDLINE
DN 21429707 PubMed ID: 11543874
TI Molecular pathophysiology and targeted therapeutics for muscular dystrophy.
AU Hoffman E P; Dressman D
CS Research Center for Genetic Medicine, Children's National Medical Center,
Washington DC 20010, USA.. ehoffman@cnmc.org
SO TRENDS IN PHARMACOLOGICAL SCIENCES, (2001 Sep) 22 (9) 465-70. Ref: 58
Journal code: 7906158. ISSN: 0165-6147.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 200110
ED Entered STN: 20010910
Last Updated on STN: 20011029
Entered Medline: 20011025

L13 ANSWER 8 OF 31 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2001:321416 BIOSIS
DN PREV200100321416
TI **Adeno-associated** virus mediated gene transfer in the retinal pigment epithelium of the RPE65 mutant **dog**.
AU Ray, J. (1); Scarpino, V. (1); Hauswirth, W.; Pearce-Kelling, S. (1); Acland, G. (1); Aguirre, G. (1)
CS (1) J. A. Baker Institute for Animal Health, Cornell University, Ithaca,
NY USA
SO IOVS, (March 15, 2001) Vol. 42, No. 4, pp. S346. print.
Meeting Info.: Annual Meeting of the Association for Research in Vision
and Ophthalmology Fort Lauderdale, Florida, USA April 29-May 04, 2001
DT Conference
LA English
SL English

L13 ANSWER 9 OF 31 MEDLINE
AN 2001498386 MEDLINE
DN 21432000 PubMed ID: 11545609
TI Muscle-directed gene transfer and transient immune suppression result in
sustained partial correction of canine hemophilia B caused by a null mutation.
AU Herzog R W; Mount J D; Arruda V R; High K A; Lothrop C D Jr
CS Department of Pediatrics, University of Pennsylvania Medical Center,
Philadelphia, PA 19104, USA.
NC R01 HL61921 (NHLBI)
SO MOLECULAR THERAPY, (2001 Sep) 4 (3) 192-200.
Journal code: 100890581. ISSN: 1525-0016.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200111
ED Entered STN: 20010910
Last Updated on STN: 20011105
Entered Medline: 20011101

L13 ANSWER 10 OF 31 MEDLINE DUPLICATE 3
AN 2001309385 MEDLINE
DN 21225294 PubMed ID: 11326284
TI Gene therapy restores vision in a canine model of childhood blindness.
AU Acland G M; Aguirre G D; Ray J; Zhang Q; Aleman T S; Cideciyan A V;
Pearce-Kelling S E; Anand V; Zeng Y; Maguire A M; Jacobson S G; Hauswirth
W W; Bennett J
CS James A. Baker Institute for Animal Health, College of Veterinary Medicine, Cornell University, Ithaca, New York, USA.
NC EY06855 (NEI)
EY10820 (NEI)
EY11123 (NEI)
EY11142 (NEI)
SO NATURE GENETICS, (2001 May) 28 (1) 92-5.
Journal code: 9216904. ISSN: 1061-4036.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200105
ED Entered STN: 20010604
Last Updated on STN: 20010604
Entered Medline: 20010531

=> d ibib ab 9

L14 ANSWER 9 OF 10 MEDLINE
ACCESSION NUMBER: 76073180 MEDLINE
DOCUMENT NUMBER: 76073180 PubMed ID: 172685
TITLE: Growth of **adeno-associated** satellite virus in **dogs** in the presence of infectious canine hepatitis virus.
AUTHOR: Ishihara C; Yanagawa R
SOURCE: JAPANESE JOURNAL OF VETERINARY RESEARCH, (1975 Jul) 23 (3)
95-100.
Journal code: 0376567. ISSN: 0047-1917.
PUB. COUNTRY: Japan

Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197602
ENTRY DATE: Entered STN: 19900313
Last Updated on STN: 19900313
Entered Medline: 19760209

=> d ibib ab l13 9

L13 ANSWER 9 OF 31 MEDLINE
ACCESSION NUMBER: 2001498386 MEDLINE
DOCUMENT NUMBER: 21432000 PubMed ID: 11545609
TITLE: Muscle-directed gene transfer and transient immune suppression result in sustained partial correction of canine hemophilia B caused by a null mutation.
AUTHOR: Herzog R W; Mount J D; Arruda V R; High K A; Lothrop C D Jr
CORPORATE SOURCE: Department of Pediatrics, University of Pennsylvania
Medical Center, Philadelphia, PA 19104, USA.
CONTRACT NUMBER: R01 HL61921 (NHLBI)
SOURCE: MOLECULAR THERAPY, (2001 Sep) 4 (3) 192-200.
Journal code: 100890581. ISSN: 1525-0016.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200111
ENTRY DATE: Entered STN: 20010910
Last Updated on STN: 20011105
Entered Medline: 20011101
AB The X-linked bleeding disorder hemophilia B is caused by absence of functional blood coagulation factor IX (F9) and can be treated by **adeno-associated** viral (AAV) mediated gene transfer to skeletal muscle. The safety of this approach is currently being evaluated in a phase I clinical trial. Efficacy of this and several other gene therapy strategies has been addressed in hemophilia B **dogs**, an important preclinical model of the disease. While previously published data demonstrated sustained expression of canine F9 in **dogs** with a missense mutation in the gene F9, we show here that AAV-mediated canine F9 gene transfer to skeletal muscle of hemophilia B **dogs** carrying a null mutation of F9 (causing an early stop codon and an unstable mRNA) results in induction of inhibitory anti-canine F9 at comparable vector doses (1 x 10(12) vector genomes/kg). Thus, the risk of inhibitor formation following AAV-mediated F9 gene therapy may be influenced by the nature of the underlying mutation in F9. Transient immune suppression with cyclophosphamide at the time of vector administration blocked formation of anti-canine F9 antibodies in the one animal treated with this approach. Treatment with this combination of gene transfer and transient immune modulation has resulted in sustained expression (>8 months) of canine F9 at levels sufficient for partial correction of coagulation parameters.

=> d ti so 1-10

L14 ANSWER 1 OF 10 MEDLINE
TI Gene therapy for hemophilia.
SO Curr Opin Mol Ther, (1999 Aug) 1 (4) 493-9. Ref: 52
Journal code: 100891485. ISSN: 1464-8431.

L14 ANSWER 2 OF 10 MEDLINE
TI Persistent expression of canine factor IX in hemophilia B canines.
SO GENE THERAPY, (1999 Oct) 6 (10) 1695-704.
Journal code: 9421525. ISSN: 0969-7128.

L14 ANSWER 3 OF 10 MEDLINE
TI Persistent transgene product in retina, optic nerve and brain after intraocular injection of rAAV.
SO VISION RESEARCH, (1999 Jul) 39 (15) 2545-53.
Journal code: 0417402. ISSN: 0042-6989.

L14 ANSWER 4 OF 10 MEDLINE
TI Correction of hemophilia B in canine and murine models using recombinant adeno-associated viral vectors.
SO NATURE MEDICINE, (1999 Jan) 5 (1) 64-70.
Journal code: 9502015. ISSN: 1078-8956.

L14 ANSWER 5 OF 10 MEDLINE
TI Long-term correction of canine hemophilia B by gene transfer of blood coagulation factor IX mediated by adeno-associated viral vector.
SO NATURE MEDICINE, (1999 Jan) 5 (1) 56-63.
Journal code: 9502015. ISSN: 1078-8956.

L14 ANSWER 6 OF 10 MEDLINE
TI Direct intramuscular injection with recombinant AAV vectors results in sustained expression in a dog model of hemophilia.
SO GENE THERAPY, (1998 Jan) 5 (1) 40-9.
Journal code: 9421525. ISSN: 0969-7128.

L14 ANSWER 7 OF 10 MEDLINE
TI Persistent and therapeutic concentrations of human factor IX in mice after hepatic gene transfer of recombinant AAV vectors.
SO NATURE GENETICS, (1997 Jul) 16 (3) 270-6.
Journal code: 9216904. ISSN: 1061-4036.

L14 ANSWER 8 OF 10 MEDLINE
TI Gene transfer into hematopoietic progenitor and stem cells: progress and problems.
SO STEM CELLS, (1994 Nov) 12 (6) 563-76. Ref: 98
Journal code: 9304532. ISSN: 1066-5099.

L14 ANSWER 9 OF 10 MEDLINE
TI Growth of **adeno-associated** satellite virus in **dogs** in the presence of infectious canine hepatitis virus.
SO JAPANESE JOURNAL OF VETERINARY RESEARCH, (1975 Jul) 23 (3) 95-100.
Journal code: 0376567. ISSN: 0047-1917.

L14 ANSWER 10 OF 10 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI DISTRIBUTION OF ANTIBODIES IN **DOGS** AGAINST **ADENO** **ASSOCIATED** SATELLITE VIRUS ASSOCIATED WITH INFECTIOUS CANINE HEPATITIS VIRUS AND SEROLOGICAL TYPING OF THE SATELLITE VIRUS.
SO Jpn. J. Vet. Res., (1971) 19 (1-2), 40-41.
CODEN: JJVRAE. ISSN: 0047-1917.

=> d ibib ab 1

L14 ANSWER 1 OF 10 MEDLINE
ACCESSION NUMBER: 2001668325 MEDLINE
DOCUMENT NUMBER: 21570747 PubMed ID: 11713765
TITLE: Gene therapy for hemophilia.
AUTHOR: Lynch C M
CORPORATE SOURCE: Targeted Genetics Corporation, Seattle, WA 98101 USA..
lynchc@targen.com
SOURCE: Curr Opin Mol Ther, (1999 Aug) 1 (4) 493-9. Ref: 52

Journal code: 100891485. ISSN: 1464-8431.
PUB. COUNTRY: England: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200201
ENTRY DATE: Entered STN: 20011121
Last Updated on STN: 20020124
Entered Medline: 20020102
AB Hemophilia is a genetically inherited bleeding disorder caused by a deficiency of the blood clotting factors VIII (hemophilia A) or IX (hemophilia B). Hemophiliacs suffer prolonged bleeding which can be life threatening and often leads to chronic disabilities. Current hemophilia treatment involves infusions of plasma-derived or recombinant clotting factor in response to bleeding crises. Prophylactic treatment is not available and current treatments remain problematic. The development of a gene therapy for hemophilia has been under investigation for the past decade. An overview is presented of the initial efforts using retroviral and adenoviral vectors for ex vivo and in vivo gene delivery strategies, respectively. Recent progress in developing FIX and FVIII **adeno-associated** virus vectors is reviewed. Sustained expression of therapeutic levels of FIX and FVIII have been demonstrated in mice. Phenotypic correction of hemophilia B has been shown in the murine and **dog** models of disease. A phase I human clinical trial has been initiated involving intramuscular injection of FIX. Prospectsfor hemophilia gene therapy look bright and the hopefor a cure has now moved from the realm of the possible to the probable.

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DICTIONARY FILE UPDATES: 17 JUN 2002 HIGHEST RN 431874-59-8

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Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES
for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> E "MG132"/CN 25
E1 1 MG12LI1.5AL/CN
E2 1 MG12SC/CN
E3 0 --> MG132/CN
E4 1 MG13AL7ZN/CN
E5 1 MG150D/CN
E6 1 MG15AL/CN
E7 1 MG15AL0.4ZN/CN
E8 1 MG15AL0.5ZN/CN
E9 1 MG15AL12ZN/CN
E10 1 MG15AL15ZN/CN
E11 1 MG15AL1CA/CN
E12 1 MG15AL3ZN/CN
E13 1 MG15AL8ZN/CN
E14 1 MG15LI1.5AL/CN
E15 1 MG15ND2NI2/CN
E16 1 MG15NI2PR2/CN
E17 1 MG16SC/CN
E18 1 MG17ND2/CN
E19 1 MG17PR2/CN
E20 1 MG1AL10ZN/CN
E21 1 MG2/CN
E22 1 MG2+/CN
E23 1 MG2+ ION TRANSPORTER (UREAPLASMA UREALYTICUM STRAIN SEROVAR_3 GENE MGTE)/CN
E24 1 MG2+ TRANSPORT ATPASE (ESCHERICHIA COLI STRAIN O157:H7 GENE ECS5219)/CN
E25 1 MG2+ TRANSPORT ATPASE, P-TYPE 1 (ESCHERICHIA COLI O157:H7 STRAIN EDL933 GENE MGTA)/CN

=> E "MG-132"/CN 25
E1 1 MG++/CITRATE COMPLEX TRANSPORTER (XYLELLA FASTIDIOSA GENE XF0320)/CN
E2 1 MG-110-O/CN
E3 0 --> MG-132/CN
E4 1 MG-15AL-1/2ZN/CN
E5 1 MG-2/CN
E6 1 MG-50/CN
E7 1 MG-5V/C/CN
E8 1 MG-9AL/CN
E9 1 MG-ADP/CN
E10 1 MG-AS/CN
E11 1 MG-CHELATASE (SOYBEAN GENE CHLH SUBUNIT CHLH PRECURSOR)/CN
E12 1 MG-CHELATASE SUBUNIT CHLI AND CHLD (MOXR-LIKE ATPASE AND VWF DOMAIN) (METHANOPYRUS KANDLERI STRAIN AV19 GENE CHLI/CHLD)/CN
E13 1 MG-CP/CN
E14 1 MG-CTP/CN
E15 1 MG-DATP/CN
E16 1 MG-DCTP/CN
E17 1 MG-DEPENDENT DNASE (METHANOPYRUS KANDLERI STRAIN AV19 GENE TATD)/CN
E18 1 MG-DVP/CN
E19 1 MG-GTP/CN
E20 1 MG-O-PHENANTHROLINE/CN
E21 1 MG-PROTOPORPHYRIN IX METHYL TRANSFERASE (NOSTOC SP. PCC 7120 GENE ALR3201)/CN
E22 1 MG-PROTOPORPHYRIN IX METHYLTRANSFERASE/CN
E23 1 MG-PROTOPORPHYRIN IX MONOMETHYL ESTER OXIDATIVE CYCLASE (BACILLUS HALODURANS STRAIN C-125 GENE BH2952)/CN
E24 1 MG-PROTOPORPHYRIN IX MONOMETHYL ESTER OXIDATIVE CYCLASE (CLOSTRIDIUM PERFRINGENS STRAIN 13 GENE CPE1645)/CN
E25 1 MG-PROTOPORPHYRIN IX MONOMETHYL ESTER OXIDATIVE CYCLASE BCHE (HELIOBACILLUS MOBILIS CLONE PHM6 GENE BCHE)/CN

=> E "CALPAIN INHIBITOR"/CN 25
E1 1 CALPAIN II (RAT CLONE 31-1 LARGE SUBUNIT) (EC 3.4.22.17)/CN
E2 1 CALPAIN II (RAT CLONE PT7-7F-21K SMALL SUBUNIT)/CN
E3 0 --> CALPAIN INHIBITOR/CN

E4 1 CALPAIN INHIBITOR I/CN
E5 1 CALPAIN INHIBITOR II/CN
E6 1 CALPAIN INHIBITOR III/CN
E7 1 CALPAIN P94/CN
E8 1 CALPAIN, LARGE SUBUNIT, ISOFORM .MU. (RAT CLONE .LAMBDA.S14)/CN
E9 1 CALPAIN, PRO-/CN
E10 1 CALPAIN, SMALL SUBUNIT, ISOFORM .MU., C-TERMINAL FRAGMENT (RAT)/CN
E11 1 CALPAIN-10/CN
E12 1 CALPAIN-LIKE PROTEASE (MOUSE GENE CAPN10)/CN
E13 1 CALPAIN-LIKE PROTEIN (TRYPANOSOMA BRUCEI STRAIN 427 784-AMINO-ACID)/CN
E14 1 CALPAIN-MOTIF CONTAINING (DROSOPHILA MELANOGASTER STRAIN CANTONS GENE SMALL-OPTIC-LOBES)/CN
E15 1 CALPANATE/CN
E16 1 CALPASTATIN/CN
E17 1 CALPASTATIN (CATTLE CLONE PBSA1)/CN
E18 1 CALPASTATIN (CATTLE HEART CLONE 1/2 786-AMINO ACID ISOFORM)/CN
E19 1 CALPASTATIN (CATTLE LEUKOCYTE GENE CAST FRAGMENT)/CN
E20 1 CALPASTATIN (HUMAN CLONE C-2 TESTIS-SPECIFIC ISOENZYME)/CN
E21 1 CALPASTATIN (HUMAN CLONE L-7 TESTIS-SPECIFIC ISOENZYME)/CN
E22 1 CALPASTATIN (HUMAN CLONE Y-19 TESTIS-SPECIFIC ISOENZYME)/CN
E23 1 CALPASTATIN (HUMAN)/CN
E24 1 CALPASTATIN (OVIS ARIES STRAIN DORSET-DOWN LEUKOCYTE GENE CAST ALLELE A/M FRAGMENT)/CN
E25 1 CALPASTATIN (RAT BRAIN CLONE RNCAST103)/CN

=> S E4 OR E5 OR E6
1 "CALPAIN INHIBITOR I"/CN
1 "CALPAIN INHIBITOR II"/CN
1 "CALPAIN INHIBITOR III"/CN
L15 3 "CALPAIN INHIBITOR I"/CN OR "CALPAIN INHIBITOR II"/CN OR "CALPAIN INHIBITOR III"/CN

=> DIS L15 1 SQIDE
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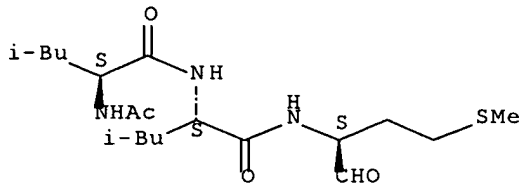
L15 ANSWER 1 OF 3 REGISTRY COPYRIGHT 2002 ACS
RN 110115-07-6 REGISTRY
CN L-Leucinamide, N-acetyl-L-leucyl-N-[(1S)-1-formyl-3-(methylthio)propyl]-
(9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN L-Leucinamide, N-acetyl-L-leucyl-N-[1-formyl-3-(methylthio)propyl]-, (S)-
OTHER NAMES:
CN **Calpain inhibitor II**
CN CI 2
CN SUAM 312
FS STEREOSEARCH
DR 105467-51-4
MF C19 H35 N3 O4 S
SR CA
LC STN Files: AGRICOLA, BIOSIS, CA, CANCERLIT, CAPLUS, CHEMCATS, CSCHEM,
MEDLINE, TOXCENTER, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

58 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
59 REFERENCES IN FILE CAPLUS (1967 TO DATE)

=> DIS L15 2 SQIDE
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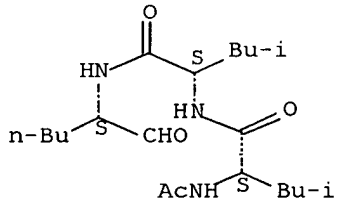
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L15 ANSWER 2 OF 3 REGISTRY COPYRIGHT 2002 ACS
RN 110044-82-1 REGISTRY
CN L-Leucinamide, N-acetyl-L-leucyl-N-[(1S)-1-formylpentyl]- (9CI) (CA INDEX
NAME)
OTHER CA INDEX NAMES:
CN L-Leucinamide, N-acetyl-L-leucyl-N-(1-formylpentyl)-, (S)-
OTHER NAMES:
CN 6: PN: WO0002548 PAGE: 30 claimed sequence
CN **Calpain inhibitor I**
CN CI-1 (peptide)
CN MG 101
FS STEREOSEARCH
MF C20 H37 N3 O4
SR CA
LC STN Files: AGRICOLA, BIOSIS, CA, CANCERLIT, CAPLUS, CHEMCATS, CSCHEM,
MEDLINE, TOXCENTER, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

151 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
151 REFERENCES IN FILE CAPLUS (1967 TO DATE)

=> DIS L15 3 SQIDE
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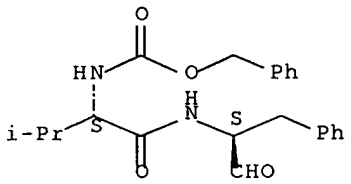
L15 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2002 ACS

RN 88191-84-8 REGISTRY
CN Carbamic acid, [(1S)-1-[[[(1S)-1-formyl-2-phenylethyl]amino]carbonyl]-2-methylpropyl]-, phenylmethyl ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Carbamic acid, [1-[[(1-formyl-2-phenylethyl)amino]carbonyl]-2-methylpropyl]-, phenylmethyl ester, [S-(R*,R*)]-
OTHER NAMES:
CN **Calpain Inhibitor III**
CN MDL 28170
FS STEREOSEARCH
MF C22 H26 N2 O4
LC STN Files: BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, CHEMCATS,
CSCHEM, EMBASE, MEDLINE, TOXCENTER, USPATFULL

Absolute stereochemistry. Rotation (-).



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

53 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
53 REFERENCES IN FILE CAPLUS (1967 TO DATE)

=> E "CALPAIN INHIBITOR"/CN 25
E1 1 CALPAIN II (RAT CLONE 31-1 LARGE SUBUNIT) (EC 3.4.22.17)/CN
E2 1 CALPAIN II (RAT CLONE PT7-7F-21K SMALL SUBUNIT)/CN
E3 0 --> CALPAIN INHIBITOR/CN
E4 1 CALPAIN INHIBITOR I/CN
E5 1 CALPAIN INHIBITOR II/CN
E6 1 CALPAIN INHIBITOR III/CN
E7 1 CALPAIN P94/CN
E8 1 CALPAIN, LARGE SUBUNIT, ISOFORM .MU. (RAT CLONE .LAMBDA.S14)/CN
E9 1 CALPAIN, PRO-/CN
E10 1 CALPAIN, SMALL SUBUNIT, ISOFORM .MU., C-TERMINAL FRAGMENT (RAT)/CN
E11 1 CALPAIN-10/CN
E12 1 CALPAIN-LIKE PROTEASE (MOUSE GENE CAPN10)/CN
E13 1 CALPAIN-LIKE PROTEIN (TRYPANOSOMA BRUCEI STRAIN 427 784-AMINO-ACID)/CN
E14 1 CALPAIN-MOTIF CONTAINING (DROSOPHILA MELANOGASTER STRAIN CANTONS GENE SMALL-OPTIC-LOBES)/CN
E15 1 CALPANATE/CN
E16 1 CALPASTATIN/CN
E17 1 CALPASTATIN (CATTLE CLONE PBSA1)/CN
E18 1 CALPASTATIN (CATTLE HEART CLONE 1/2 786-AMINO ACID ISOFORM)/CN
E19 1 CALPASTATIN (CATTLE LEUKOCYTE GENE CAST FRAGMENT)/CN
E20 1 CALPASTATIN (HUMAN CLONE C-2 TESTIS-SPECIFIC ISOENZYME)/CN
E21 1 CALPASTATIN (HUMAN CLONE L-7 TESTIS-SPECIFIC ISOENZYME)/CN
E22 1 CALPASTATIN (HUMAN CLONE Y-19 TESTIS-SPECIFIC ISOENZYME)/CN
E23 1 CALPASTATIN (HUMAN)/CN
E24 1 CALPASTATIN (OVIS ARIES STRAIN DORSET-DOWN LEUKOCYTE GENE CAST ALLELE A/M FRAGMENT)/CN
E25 1 CALPASTATIN (RAT BRAIN CLONE RNCAST103)/CN

=> E "LLNL"/CN 25
E1 1 LLN/CN
E2 1 LLN 1201/CN
E3 0 --> LLNL/CN
E4 1 LLOYD'S D/CN
E5 1 LLOYD'S DH36/CN
E6 1 LLOYDS AH34S/CN
E7 1 LLOYDS DH32/CN
E8 1 LLS 71040/CN
E9 1 LLTX-G 2/CN
E10 1 LLUMAR/CN
E11 1 LLUNGIANIN A/CN
E12 1 LLUNGIANIN B/CN
E13 1 LLVVPAIKKDYGSQEDFTQV/CN
E14 1 LLWP/CN
E15 1 LLX/CN
E16 1 LLYUA/CN
E17 4 LM/CN
E18 1 LM (CHINESE EMULSIFIER)/CN
E19 1 LM (LUBRICANT)/CN
E20 1 LM (SURFACTANT)/CN
E21 1 LM 001/CN
E22 2 LM 1/CN
E23 1 LM 1 (HUMAN LENS FLUOROPHORE)/CN
E24 1 LM 1 (STATIONARY PHASE)/CN
E25 1 LM 10/CN

=> E "MG115"/CN 25
E1 1 MG11/CN
E2 1 MG11+/CN
E3 0 --> MG115/CN
E4 1 MG11A/CN
E5 1 MG12+/CN
E6 1 MG12AL15ZN/CN
E7 1 MG12AL2CA/CN
E8 1 MG12LI1.5AL/CN
E9 1 MG12SC/CN
E10 1 MG13AL7ZN/CN
E11 1 MG150D/CN
E12 1 MG15AL/CN
E13 1 MG15AL0.4ZN/CN
E14 1 MG15AL0.5ZN/CN
E15 1 MG15AL12ZN/CN
E16 1 MG15AL15ZN/CN
E17 1 MG15AL1CA/CN
E18 1 MG15AL3ZN/CN
E19 1 MG15AL8ZN/CN
E20 1 MG15LI1.5AL/CN
E21 1 MG15ND2NI2/CN
E22 1 MG15NI2PR2/CN
E23 1 MG16SC/CN
E24 1 MG17ND2/CN
E25 1 MG17PR2/CN

=> E "N-BENZYLOXY-CARBONYL-ISO"/CN 25
E1 1 N-BENZYLOXY-9-CYCLOPENTYLADENINE/CN
E2 1 N-BENZYLOXY-9-ETHYLADENINE/CN
E3 0 --> N-BENZYLOXY-CARBONYL-ISO/CN
E4 1 N-BENZYLOXY-DL-LEUCINE/CN
E5 1 N-BENZYLOXY-DL-PHENYLALANINE/CN
E6 1 N-BENZYLOXY-DL-VALINE/CN
E7 1 N-BENZYLOXY-L-ALANINE/CN
E8 1 N-BENZYLOXY-L-ALANINE N-CARBOXYANHYDRIDE/CN
E9 1 N-BENZYLOXY-L-VALINE/CN
E10 1 N-BENZYLOXY-L-VALINE N-CARBOXYANHYDRIDE/CN
E11 1 N-BENZYLOXY-N'-(3-CHLORO-4-

METHYLPHENYL)UREA/CN
E12 1 N-BENZYLOXY-N'-(4-CHLOROPHENYL)UREA/CN
E13 1 N-BENZYLOXY-N-(1-ETHYLPROPYL)AMINE/CN
E14 1 N-BENZYLOXY-N-(1-PHENYLETHYL)-4-CARBOXYCINNAMAMIDE/CN
E15 1 N-BENZYLOXY-N-(2-METHYLPROPYL)AMINE/CN
E16 1 N-BENZYLOXY-N-METHOXY-N'-METHYLUREA/CN
E17 1 N-BENZYLOXY-N-METHOXYAMINE/CN
E18 1 N-BENZYLOXY-N-METHYLAMINE/CN
E19 1 N-BENZYLOXYACETYL-5-AMINOINDOLINE/CN
E20 1 N-BENZYLOXYADENOSINE/CN
E21 1 N-BENZYLOXYCARBAMIC ACID TRIMETHYLSILYL ESTER/CN
E22 1 N-BENZYLOXYCARBONY-O-TERT-BUTYL-L-THREONYL-L-TYROSYL-O-TERT-BUTYL-L-THREONYL-L-GLUTAMINYL-.BETA.-TERT-BUTYL-L-ASPARTYLPHENYLALANINE PHENYL ESTER/CN
E23 1 N-BENZYLOXYCARBONYL ASPARTIC ACID-TRIETHYLENE GLYCOL COPOLYMER/CN
E24 1 N-BENZYLOXYCARBONYL GLYCINE 2-NITROPHENYL ESTER/CN
E25 1 N-BENZYLOXYCARBONYL GLYCINE P-PHENYLAZOPHENYL ESTER/CN

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=> s l-leucinamide
L16 366 L-LEUCINAMIDE

=> s calpain inhibitor I
L17 365 CALPAIN INHIBITOR I

=> s calpain inhibitor II
L18 119 CALPAIN INHIBITOR II

=> s calpain inhibitor III
L19 7 CALPAIN INHIBITOR III

=> s mg132
L20 727 MG132

=> s llnl
L21 952 LLNL

=> s mg115
L22 84 MG115

=> s psi
L23 67122 PSI

=> s n-benzyloxy-carbonyl
L24 192 N-BENZYLOXY-CARBONYL

=> d his

(FILE 'HOME' ENTERED AT 14:28:55 ON 19 JUN 2002)

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 14:29:05 ON 19 JUN 2002
L1 5751 S ADENO-ASSOCIATED
L2 1438993 S LIVER
L3 195 S L1(S)L2
L4 87 S L3 NOT PY>1999
L5 47 DUP REM L4 (40 DUPLICATES REMOVED)
L6 39542 S TRANSGENE
L7 12 S L6 AND L5
L8 122109 S EDTA
L9 7 S L1 AND L8
L10 5 DUP REM L9 (2 DUPLICATES REMOVED)
L11 594168 S DOG
L12 48 S L1(S)L11
L13 31 DUP REM L12 (17 DUPLICATES REMOVED)
L14 10 S L13 NOT PY>1999

FILE 'REGISTRY' ENTERED AT 14:48:51 ON 19 JUN 2002
E "MG132"/CN 25
E "MG-132"/CN 25
E "CALPAIN INHIBITOR"/CN 25
L15 3 S E4 OR E5 OR E6
E "CALPAIN INHIBITOR"/CN 25
E "LLNL"/CN 25
E "MG115"/CN 25
E "N-BENZYLOXY-CARBONYL-ISO"/CN 25

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 14:53:04 ON 19 JUN 2002
L16 366 S L-LEUCINAMIDE
L17 365 S CALPAIN INHIBITOR I
L18 119 S CALPAIN INHIBITOR II
L19 7 S CALPAIN INHIBITOR III
L20 727 S MG132
L21 952 S LLNL
L22 84 S MG115
L23 67122 S PSI
L24 192 S N-BENZYLOXY-CARBONYL

=> s l1 and l16
L25 0 L1 AND L16

=> s l1 and l17
L26 1 L1 AND L17

=> d ti so

L26 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS
TI Endosomal processing limits gene transfer to polarized airway epithelia by
adeno-associated virus
SO Journal of Clinical Investigation (2000), 105(11), 1573-1587
CODEN: JCINAO; ISSN: 0021-9738

=> d l1 and l18
L18 IS NOT VALID HERE
For an explanation, enter "HELP DISPLAY".

=> s l1 and l18
L27 0 L1 AND L18

=> s l1 and l19
L28 0 L1 AND L19

=> s l1 and l20
L29 1 L1 AND L20

=> d ti so

L29 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS

TI Endosomal processing limits gene transfer to polarized airway epithelia by
adeno-associated virus
SO Journal of Clinical Investigation (2000), 105(11), 1573-1587
CODEN: JCINAO; ISSN: 0021-9738

=> s l1 and l21
L30 0 L1 AND L21

=> s l1 and l22
L31 0 L1 AND L22

=> d l1 and l23
L23 IS NOT VALID HERE
For an explanation, enter "HELP DISPLAY".

=> s l1 and l23
L32 11 L1 AND L23

=> dup rem l32
PROCESSING COMPLETED FOR L32
L33 9 DUP REM L32 (2 DUPLICATES REMOVED)

=> d ti so 1-9

L33 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2002 ACS
TI Modeling methods and applications for biological agent determination
SO PCT Int. Appl., 32 pp.
CODEN: PIXXD2

L33 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2002 ACS
TI Methods for screening or evaluating the performance of a set of biological
agents in living target cells, and their uses
SO PCT Int. Appl., 32 pp.
CODEN: PIXXD2

L33 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2002 ACS
TI Generation of a high-capacity hybrid vector: packaging of recombinant
adenoassociated virus replicative intermediates in adenovirus capsids overcomes the limited cloning capacity of adenoassociated virus vectors
SO Virology (2001), 288(2), 236-246
CODEN: VIRLAX; ISSN: 0042-6822

L33 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2002 ACS
TI Method to decrease the titers of contaminating helper adenovirus during
the production of recombinant **adeno-associated** virus
SO BioTechniques (2000), 28(6), 1096,1098,1100
CODEN: BTNQDO; ISSN: 0736-6205

L33 ANSWER 5 OF 9 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI AAV Rep protein enhances the generation of a recombinant mini-adenovirus
utilizing an Ad/AAV hybrid virus.
SO Blood, (November 16, 2000) Vol. 96, No. 11 Part 2, pp. 378b. print.
Meeting Info.: 42nd Annual Meeting of the American Society of Hematology
San Francisco, California, USA December 01-05, 2000 American Society of
Hematology
. ISSN: 0006-4971.

L33 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2002 ACS
TI Expression of fusion proteins
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2

L33 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2002 ACS
TI Method for producing viral vectors using baculovirus for provision of
complementing functions
SO PCT Int. Appl., 67 pp.
CODEN: PIXXD2

L33 ANSWER 8 OF 9 MEDLINE DUPLICATE 1
TI Construction and expression of a recombinant **adeno-associated** virus that harbors a human beta-globin-encoding cDNA.
SO GENE, (1991 Aug 15) 104 (2) 253-7.
Journal code: 7706761. ISSN: 0378-1119.

L33 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2002 ACS
TI The recombinant human parvoviruses for gene therapy of hemoglobinopathies
SO SAAS Bull. Biochem. Biotechnol. (1990), 3, 63-8
CODEN: SBBBEF

=> d ibib ab 4

L33 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:419711 CAPLUS
DOCUMENT NUMBER: 133:306106
TITLE: Method to decrease the titers of contaminating helper adenovirus during the production of recombinant **adeno-associated** virus
AUTHOR(S): Zaratiegui, Mikel; Narvaiza, Inigo; Qian, Cheng; Novo,
Francisco J.
CORPORATE SOURCE: University of Navarra, Pamplona, 31080, Spain
SOURCE: BioTechniques (2000), 28(6), 1096,1098,1100
CODEN: BTNQDO; ISSN: 0736-6205
PUBLISHER: Eaton Publishing Co.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The Cre-expressing 298 cells (Cre8 cells) and the .**PSI**.5 helper virus which contains loxP sites flanking the packaging sites were used to
decrease the amt. of contaminating helper adenovirus during recombinant
adeno-assocd. virus (rAAV). The titers of contaminating helper adenovirus were .apprx.1 order of magnitude lower when the . **PSI**. helper was used in Cre8 cells instead of 298 cells. The rAAV produced by the .**PSI**. helper and the Cre8 cells was biol. active and could successfully transform 298 cells.
REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s l1 and l24
L34 0 L1 AND L24

=> log hold
COST IN U.S. DOLLARS SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST 46.66 124.72

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)
SINCE FILE TOTAL
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SESSION RESUMED IN FILE 'MEDLINE, BIOSIS, CAPLUS' AT 15:00:05 ON 19 JUN 2002
FILE 'MEDLINE' ENTERED AT 15:00:05 ON 19 JUN 2002
FILE 'BIOSIS' ENTERED AT 15:00:05 ON 19 JUN 2002
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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	46.66	124.72

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-0.62	-1.24

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(FILE 'HOME' ENTERED AT 14:28:55 ON 19 JUN 2002)

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 14:29:05 ON 19 JUN 2002
L1 5751 S ADENO-ASSOCIATED
L2 1438993 S LIVER
L3 195 S L1(S)L2
L4 87 S L3 NOT PY>1999
L5 47 DUP REM L4 (40 DUPLICATES REMOVED)
L6 39542 S TRANSGENE
L7 12 S L6 AND L5
L8 122109 S EDTA
L9 7 S L1 AND L8
L10 5 DUP REM L9 (2 DUPLICATES REMOVED)
L11 594168 S DOG
L12 48 S L1(S)L11
L13 31 DUP REM L12 (17 DUPLICATES REMOVED)
L14 10 S L13 NOT PY>1999

FILE 'REGISTRY' ENTERED AT 14:48:51 ON 19 JUN 2002
E "MG132"/CN 25
E "MG-132"/CN 25
E "CALPAIN INHIBITOR"/CN 25
L15 3 S E4 OR E5 OR E6
E "CALPAIN INHIBITOR"/CN 25
E "LLNL"/CN 25
E "MG115"/CN 25
E "N-BENZYLOXY-CARBONYL-ISO"/CN 25

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 14:53:04 ON 19 JUN 2002
L16 366 S L-LEUCINAMIDE
L17 365 S CALPAIN INHIBITOR I
L18 119 S CALPAIN INHIBITOR II
L19 7 S CALPAIN INHIBITOR III
L20 727 S MG132
L21 952 S LLNL
L22 84 S MG115
L23 67122 S PSI
L24 192 S N-BENZYLOXY-CARBONYL
L25 0 S L1 AND L16
L26 1 S L1 AND L17
L27 0 S L1 AND L18
L28 0 S L1 AND L19
L29 1 S L1 AND L20
L30 0 S L1 AND L21
L31 0 S L1 AND L22
L32 11 S L1 AND L23
L33 9 DUP REM L32 (2 DUPLICATES REMOVED)
L34 0 S L1 AND L24

=> s canine
L35 120514 CANINE

=> s l1 and l35
L36 90 L1 AND L35

=> s l36 and l6
L37 10 L36 AND L6

=> dup rem l37
PROCESSING COMPLETED FOR L37
L38 6 DUP REM L37 (4 DUPLICATES REMOVED)

=> d ti so 1-6

L38 ANSWER 1 OF 6 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Alternate AAV serotypes result in enhanced factor IX expression in murine
and **canine** models of hemophilia B.
SO Blood, (November 16, 2001) Vol. 98, No. 11 Part 1, pp. 745a.
http://www.bloodjournal.org/. print.
Meeting Info.: 43rd Annual Meeting of the American Society of Hematology,
Part 1 Orlando, Florida, USA December 07-11, 2001
ISSN: 0006-4971.

L38 ANSWER 2 OF 6 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Sustained and complete phenotype correction of Hemophilia B mice following
intramuscular injection of AAV1 serotype vectors.
SO Blood, (November 16, 2001) Vol. 98, No. 11 Part 1, pp. 704a.
http://www.bloodjournal.org/. print.
Meeting Info.: 43rd Annual Meeting of the American Society of Hematology,
Part 1 Orlando, Florida, USA December 07-11, 2001
ISSN: 0006-4971.

L38 ANSWER 3 OF 6 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Induction of immunological tolerance to a coagulation factor antigen by
hepatic gene transfer.
SO Blood, (November 16, 2001) Vol. 98, No. 11 Part 1, pp. 694a.
http://www.bloodjournal.org/. print.
Meeting Info.: 43rd Annual Meeting of the American Society of Hematology,
Part 1 Orlando, Florida, USA December 07-11, 2001
ISSN: 0006-4971.

L38 ANSWER 4 OF 6 MEDLINE DUPLICATE 1
TI AAV-mediated gene transfer for hemophilia.
SO ANNALS OF THE NEW YORK ACADEMY OF SCIENCES, (2001 Dec) 953 64-74. Ref: 29
Journal code: 7506858. ISSN: 0077-8923.

L38 ANSWER 5 OF 6 MEDLINE DUPLICATE 2
TI Several log increase in therapeutic **transgene** delivery by distinct **adeno-associated** viral serotype vectors.
SO MOLECULAR THERAPY, (2000 Dec) 2 (6) 619-23.
Journal code: 100890581. ISSN: 1525-0016.

L38 ANSWER 6 OF 6 MEDLINE DUPLICATE 3
TI Persistent expression of **canine** factor IX in hemophilia B **canines**.
SO GENE THERAPY, (1999 Oct) 6 (10) 1695-704.
Journal code: 9421525. ISSN: 0969-7128.

=> d ibib ab 4

L38 ANSWER 4 OF 6 MEDLINE DUPLICATE 1
ACCESSION NUMBER: 2002069770 MEDLINE
DOCUMENT NUMBER: 21653704 PubMed ID: 11795424
TITLE: AAV-mediated gene transfer for hemophilia.
AUTHOR: High K A
CORPORATE SOURCE: Department of Pediatrics, University of Pennsylvania School
of Medicine, The Children's Hospital of Philadelphia, 19104, USA.. high@email.chop.edu
SOURCE: ANNALS OF THE NEW YORK ACADEMY OF SCIENCES, (2001 Dec) 953
64-74. Ref: 29
Journal code: 7506858. ISSN: 0077-8923.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200202
ENTRY DATE: Entered STN: 20020125
Last Updated on STN: 20020205
Entered Medline: 20020204
AB Hemophilia is a particularly attractive model for developing a gene transfer approach for the treatment of disease. The protein is very well characterized, the genes are cloned and available, and there are large and small animal models of the disease. Moreover, in contrast to many diseases, there is no requirement for a specific target tissue for gene delivery, and the gene product itself does not require precise regulation of expression. Earlier efforts to establish a gene transfer approach to the treatment of hemophilia had failed to achieve the twin goals of long-term expression at levels that were adequate to result in phenotypic improvement of the disease. We have exploited advances in vector development that occurred in the mid-1990s to establish an experimental basis for an AAV (**adeno-associated** viral vector)-mediated gene transfer approach to the treatment of hemophilia B. Based on the observation that introduction of an AAV vector into skeletal muscle could result in sustained expression of beta-galactosidase, we engineered an AAV vector expressing human factor IX and demonstrated in immunodeficient mice that intramuscular injection of the vector resulted in long-term expression of the secreted **transgene** product factor IX. Subsequently, we generated an AAV vector expressing **canine** factor IX; intramuscular injection into dogs with severe hemophilia B resulted in a dose-dependent increase in circulating levels of factor IX. The animal treated at the highest dose showed prolonged expression (>3 years and still under observation) at a level (70 ng/ml, 1.4% of normal circulating levels of factor IX) likely to result in phenotypic improvement in humans. Detailed studies in tissue culture using human myotubes have shown that muscle cells are capable of executing the posttranslational modifications required for activity of factor IX, and that the specific activity of myotube-synthesized factor IX is similar to that of hepatocyte-synthesized material, although some details of posttranslational processing differ. Based on these and other safety and efficacy studies, a clinical trial of AAV-mediated, muscle-directed gene transfer for hemophilia B has been initiated. The study has a dose-escalation design, with three subjects to be enrolled in three dose cohorts beginning with a dose of 2 x 10(11) vg/kg. Results in the initial dose cohort showed no evidence of toxicity associated with vector administration or **transgene** expression. Analysis of muscle biopsies done on injected tissue showed clear evidence of gene transfer by PCR and Southern blot and of gene expression by immunocytochemistry. The general characteristics of muscle transduction appear similar in humans and in other animal models. The goal of dose escalation is to find a dose that is nontoxic but that results in circulating levels of factor IX >1% in all patients.

=> s recombinant adeno-associated
L39 1279 RECOMBINANT ADENO-ASSOCIATED

=> s adeno-associated(s)vector
L40 3514 ADENO-ASSOCIATED(S) VECTOR

=> s l39 or l40
L41 3731 L39 OR L40

=> d his

(FILE 'HOME' ENTERED AT 14:28:55 ON 19 JUN 2002)

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 14:29:05 ON 19 JUN 2002
L1 5751 S ADENO-ASSOCIATED
L2 1438993 S LIVER
L3 195 S L1(S)L2
L4 87 S L3 NOT PY>1999
L5 47 DUP REM L4 (40 DUPLICATES REMOVED)
L6 39542 S TRANSGENE
L7 12 S L6 AND L5
L8 122109 S EDTA
L9 7 S L1 AND L8
L10 5 DUP REM L9 (2 DUPLICATES REMOVED)
L11 594168 S DOG
L12 48 S L1(S)L11
L13 31 DUP REM L12 (17 DUPLICATES REMOVED)
L14 10 S L13 NOT PY>1999

FILE 'REGISTRY' ENTERED AT 14:48:51 ON 19 JUN 2002
E "MG132"/CN 25
E "MG-132"/CN 25
E "CALPAIN INHIBITOR"/CN 25
L15 3 S E4 OR E5 OR E6
E "CALPAIN INHIBITOR"/CN 25
E "LLNL"/CN 25
E "MG115"/CN 25
E "N-BENZYLOXY-CARBONYL-ISO"/CN 25

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 14:53:04 ON 19 JUN 2002
L16 366 S L-LEUCINAMIDE
L17 365 S CALPAIN INHIBITOR I
L18 119 S CALPAIN INHIBITOR II
L19 7 S CALPAIN INHIBITOR III
L20 727 S MG132
L21 952 S LLNL
L22 84 S MG115
L23 67122 S PSI
L24 192 S N-BENZYLOXY-CARBONYL
L25 0 S L1 AND L16
L26 1 S L1 AND L17
L27 0 S L1 AND L18
L28 0 S L1 AND L19
L29 1 S L1 AND L20
L30 0 S L1 AND L21
L31 0 S L1 AND L22

L32 11 S L1 AND L23
L33 9 DUP REM L32 (2 DUPLICATES REMOVED)
L34 0 S L1 AND L24
L35 120514 S CANINE
L36 90 S L1 AND L35
L37 10 S L36 AND L6
L38 6 DUP REM L37 (4 DUPLICATES REMOVED)
L39 1279 S RECOMBINANT ADENO-ASSOCIATED
L40 3514 S ADENO-ASSOCIATED(S)VECTOR
L41 3731 S L39 OR L40

=> s l11 or l35
L42 646328 L11 OR L35

=> s l41 and l42
L43 117 L41 AND L42

=> dup rem l43
PROCESSING COMPLETED FOR L43
L44 79 DUP REM L43 (38 DUPLICATES REMOVED)

=> s l44 not py>1999
L45 38 L44 NOT PY>1999

=> d ti so 1-38

L45 ANSWER 1 OF 38 MEDLINE
TI Gene therapy for hemophilia.
SO Curr Opin Mol Ther, (1999 Aug) 1 (4) 493-9. Ref: 52
Journal code: 100891485. ISSN: 1464-8431.

L45 ANSWER 2 OF 38 MEDLINE
TI Gene therapy using hematopoietic stem cells.
SO Curr Opin Mol Ther, (1999 Aug) 1 (4) 437-42. Ref: 53
Journal code: 100891485. ISSN: 1464-8431.

L45 ANSWER 3 OF 38 MEDLINE
TI [Natural infection with adeno-associated viruses].
Infection naturalle a virus adeno-associes.
SO ANNALES DE BIOLOGIE CLINIQUE, (1999 Nov-Dec) 57 (6) 667-75. Ref: 57
Journal code: 2984690R. ISSN: 0003-3898.

L45 ANSWER 4 OF 38 MEDLINE
TI Persistent expression of **canine** factor IX in hemophilia B **canines**.
SO GENE THERAPY, (1999 Oct) 6 (10) 1695-704.
Journal code: 9421525. ISSN: 0969-7128.

L45 ANSWER 5 OF 38 MEDLINE
TI Genetic capsid modifications allow efficient re-targeting of adeno-associated virus type 2.
SO NATURE MEDICINE, (1999 Sep) 5 (9) 1052-6.
Journal code: 9502015. ISSN: 1078-8956.

L45 ANSWER 6 OF 38 MEDLINE
TI Persistent transgene product in retina, optic nerve and brain after intraocular injection of rAAV.
SO VISION RESEARCH, (1999 Jul) 39 (15) 2545-53.
Journal code: 0417402. ISSN: 0042-6989.

L45 ANSWER 7 OF 38 MEDLINE
TI Sustained correction of bleeding disorder in hemophilia B mice by gene therapy.
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (1999 Mar 30) 96 (7) 3906-10.
Journal code: 7505876. ISSN: 0027-8424.

L45 ANSWER 8 OF 38 MEDLINE
TI Correction of hemophilia B in **canine** and murine models using **recombinant adeno-associated** viral **vectors**.
SO NATURE MEDICINE, (1999 Jan) 5 (1) 64-70.
Journal code: 9502015. ISSN: 1078-8956.

L45 ANSWER 9 OF 38 MEDLINE
TI Long-term correction of **canine** hemophilia B by gene transfer of blood coagulation factor IX mediated by **adeno-associated** viral **vector**.
SO NATURE MEDICINE, (1999 Jan) 5 (1) 56-63.
Journal code: 9502015. ISSN: 1078-8956.

L45 ANSWER 10 OF 38 MEDLINE
TI Direct intramuscular injection with recombinant AAV vectors results in sustained expression in a **dog** model of hemophilia.
SO GENE THERAPY, (1998 Jan) 5 (1) 40-9.
Journal code: 9421525. ISSN: 0969-7128.

L45 ANSWER 11 OF 38 MEDLINE
TI Membrane-associated heparan sulfate proteoglycan is a receptor for adeno-associated virus type 2 virions.
SO JOURNAL OF VIROLOGY, (1998 Feb) 72 (2) 1438-45.
Journal code: 0113724. ISSN: 0022-538X.

L45 ANSWER 12 OF 38 MEDLINE
TI Persistent and therapeutic concentrations of human factor IX in mice after hepatic gene transfer of recombinant AAV vectors.
SO NATURE GENETICS, (1997 Jul) 16 (3) 270-6.
Journal code: 9216904. ISSN: 1061-4036.

L45 ANSWER 13 OF 38 MEDLINE
TI Gene therapy for haematopoietic and lymphoid disorders.
SO CLINICAL AND EXPERIMENTAL IMMUNOLOGY, (1997 Jan) 107 Suppl 1 54-7. Ref: 13
Journal code: 0057202. ISSN: 0009-9104.

L45 ANSWER 14 OF 38 MEDLINE
TI Gene transfer into hematopoietic progenitor and stem cells: progress and problems.
SO STEM CELLS, (1994 Nov) 12 (6) 563-76. Ref: 98
Journal code: 9304532. ISSN: 1066-5099.

L45 ANSWER 15 OF 38 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Molecular characterization of AAV-mediated gene transfer of human factor IX to myotubes.
SO Blood, (Nov. 15, 1999) Vol. 94, No. 10 SUPPL. 1 PART 1, pp. 175a.
Meeting Info.: Forty-first Annual Meeting of the American Society of Hematology New Orleans, Louisiana, USA December 3-7, 1999 The American Society of Hematology
. ISSN: 0006-4971.

L45 ANSWER 16 OF 38 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Efficient retargeting of AAV2 by genetic modification of the viral capsid protein.
SO European Journal of Cancer, (Oct., 1999) Vol. 35, No. SUPPL. 5, pp. S37.
Meeting Info.: 5th International Symposium on the Biological Therapy of Cancer: From Basic Research to Clinical Applications Munich, Germany
October 27-30, 1999 Biological Therapeutics Development Group of the European Organisation for Research and Treatment of Cancer
. ISSN: 0959-8049.

L45 ANSWER 17 OF 38 BIOSIS COPYRIGHT 2002 BIOLOGICAL

ABSTRACTS INC.
TI Adeno-associated virus-mediated gene transfer of factor IX for treatment
of hemophilia B by gene therapy.
SO Thrombosis and Haemostasis, (Aug., 1999) Vol. 82, No. 2, pp. 540-546.
ISSN: 0340-6245.

L45 ANSWER 18 OF 38 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Hepatic gene therapy using **adeno-associated** virus **vectors**.
SO Seminars in Liver Disease, (1999) Vol. 19, No. 1, pp. 61-69.
ISSN: 0272-8087.

L45 ANSWER 19 OF 38 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Adeno-associated virus meadiated gene transfer in ocular tissues of **canine** mucopolysaccharidosis type VII.
SO IOVS, (March 15, 1999) Vol. 40, No. 4, pp. S936.
Meeting Info.: Annual Meeting of the Association for Research in Vision
and Ophthalmology Fort Lauderdale, Florida, USA May 9-14, 1999 Association
for Research in Vision and Opthalmology
.

L45 ANSWER 20 OF 38 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Adeno- and adeno-associated virus mediated beta-glucuronidase cDNA
transfer to treat storage in mucopolysaccharidosis VII affected eyes.
SO IOVS, (March 15, 1999) Vol. 40, No. 4, pp. S936.
Meeting Info.: Annual Meeting of the Association for Research in Vision
and Ophthalmology Fort Lauderdale, Florida, USA May 9-14, 1999 Association
for Research in Vision and Opthalmology
.

L45 ANSWER 21 OF 38 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Factor IX synthesized in **dog** and human muscle cells has specific activity comparable to plasma-derived factor IX.
SO Blood, (Nov. 15, 1998) Vol. 92, No. 10 SUPPL. 1 PART 1-2, pp. 689A.
Meeting Info.: 40th Annual Meeting of the American Society of Hematology
Miami Beach, Florida, USA December 4-8, 1998 The American Society of
Heamatology
. ISSN: 0006-4971.

L45 ANSWER 22 OF 38 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Long-term phenotypic correction of hemophilia B in a large animal model by
AAV-mediated gene transfer.
SO Blood, (Nov. 15, 1998) Vol. 92, No. 10 SUPPL. 1 PART 1-2, pp. 153A.
Meeting Info.: 40th Annual Meeting of the American Society of Hematology
Miami Beach, Florida, USA December 4-8, 1998 The American Society of
Heamatology
. ISSN: 0006-4971.

L45 ANSWER 23 OF 38 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Characterization of immune responses to factor IX in small and large
animal models for gene therapy.
SO Blood, (Nov. 15, 1998) Vol. 92, No. 10 SUPPL. 1 PART 1-2, pp. 689A.
Meeting Info.: 40th Annual Meeting of the American Society of Hematology
Miami Beach, Florida, USA December 4-8, 1998 The American Society of
Heamatology
. ISSN: 0006-4971.

L45 ANSWER 24 OF 38 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Persistent expression of **canine** fix in the hemophilia B **canine** after direct intramuscular injection of rAAV.
SO Blood, (Nov. 15, 1998) Vol. 92, No. 10 SUPPL. 1 PART 1-2, pp. 690A.
Meeting Info.: 40th Annual Meeting of the American Society of Hematology
Miami Beach, Florida, USA December 4-8, 1998 The American Society of
Heamatology
. ISSN: 0006-4971.

L45 ANSWER 25 OF 38 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Gene transfer into hematopoietic cells: Progress, problems and prospects.
SO Turkish Journal of Pediatrics, (Sept., 1998) Vol. 40, No. 3, pp. 307-336.
ISSN: 0041-4301.

L45 ANSWER 26 OF 38 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI AAV-mediated gene transfer in **dogs** with hemophilia B.
SO Journal of Investigative Medicine, (March, 1998) Vol. 46, No. 3, pp. 215A.
Meeting Info.: Annual Meeting of the Association of American Physicians,
American Society for Clinical Investigation, American Federation for
Medical Research 1998 Biomedicine: Medical Research from Bench to Bedside
Washington, D.C., USA May 1-3, 1998 American Federation for Medical
Research
. ISSN: 1081-5589.

L45 ANSWER 27 OF 38 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI **Adeno-associated** virus as a gene delivery **vector** to treat storage in ocular tissues in **canine** mucopolysaccharidosis type VII.
SO IOVS, (March 15, 1998) Vol. 39, No. 4, pp. S719.
Meeting Info.: Annual Meeting of the Association for Research in Vision
and Ophthalmology Fort Lauderdale, Florida, USA May 10-15, 1998
Association for Research in Vision and Ophthalmology
.

L45 ANSWER 28 OF 38 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Sustained expression of human factor IX in a hemophilic **canine** following direct intramuscular injection of an **adeno-associated** virus (AAV) **vector**.
SO Blood, (Nov. 15, 1997) Vol. 90, No. 10 SUPPL. 1 PART 1, pp. 240A.
Meeting Info.: 39th Annual Meeting of the American Society of Hematology
San Diego, California, USA December 5-9, 1997 The American Society of
Hematology
. ISSN: 0006-4971.

L45 ANSWER 29 OF 38 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI New developments in the generation of Ad-free, high-titer rAAV gene
therapy vectors.

SO Nature Medicine, (Nov., 1997) Vol. 3, No. 11, pp. 1295-1297.
ISSN: 1078-8956.

L45 ANSWER 30 OF 38 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Gene transfer by **adeno-associated** virus **vectors** into the central nervous system.
SO Experimental Neurology, (1997) Vol. 144, No. 1, pp. 113-124.
ISSN: 0014-4886.

L45 ANSWER 31 OF 38 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Gene therapy of hereditary immune deficiencies.
SO Archives de Pediatrie, (1996) Vol. 3, No. SUPPL. 1, pp. 69S-76S.
Meeting Info.: Thirty-first Congress of the Association des Pediatres de
Langue Francaise (Association of French Language Pediatricians) Paris,
France May 1-4, 1996
ISSN: 0929-693X.

L45 ANSWER 32 OF 38 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI A plasmid expression **vector** based on the **adeno-associated** virus (AAV) containing muscle-specific transcription elements for expression of therapeutic proteins.
SO American Journal of Human Genetics, (1995) Vol. 57, No. 4 SUPPL., pp.
A235.
Meeting Info.: 45th Annual Meeting of the American Society of Human
Genetics Minneapolis, Minnesota, USA October 24-28, 1995
ISSN: 0002-9297.

L45 ANSWER 33 OF 38 CAPLUS COPYRIGHT 2002 ACS
TI Use of insulin-like growth factor I gene to increase muscle mass and strength in vertebrates
SO PCT Int. Appl., 46 pp.
CODEN: PIXXD2

L45 ANSWER 34 OF 38 CAPLUS COPYRIGHT 2002 ACS
TI Thymidine kinase mutants with increased activity, vectors expressing
mutants, and pharmacological uses
SO U.S., 72 pp., Cont.-in-part of U.S. Ser. No. 237,592, abandoned.
CODEN: USXXAM

L45 ANSWER 35 OF 38 CAPLUS COPYRIGHT 2002 ACS
TI Gene therapy for hemophilia
SO Expert Opinion on Investigational Drugs (1997), 6(11), 1685-1690
CODEN: EOIDER; ISSN: 0967-8298

L45 ANSWER 36 OF 38 CAPLUS COPYRIGHT 2002 ACS
TI Viral vectors encoding Gax protein and their use for treating hyperproliferative disorders, in particular restenosis
SO PCT Int. Appl., 58 pp.
CODEN: PIXXD2

L45 ANSWER 37 OF 38 CAPLUS COPYRIGHT 2002 ACS
TI Gene therapy vectors carrying lipase genes for treatment of lipoproteinemias
SO PCT Int. Appl., 40 pp.
CODEN: PIXXD2

L45 ANSWER 38 OF 38 CAPLUS COPYRIGHT 2002 ACS
TI A method for preparing **adeno-associated** virus expression **vectors** for use in gene therapy
SO PCT Int. Appl., 32 pp.
CODEN: PIXXD2

=> d ibib ab 26

L45 ANSWER 26 OF 38 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1998:384830 BIOSIS
DOCUMENT NUMBER: PREV199800384830
TITLE: AAV-mediated gene transfer in **dogs** with hemophilia B.
AUTHOR(S): Herzog, R. W. (1); Yang, E. Y.; Couto, L. B.; Hagstrom, J.
N.; Elwell, D.; Chu, K.; Kung, S.-H.; Tai, S. J.; McQuiston, S. A.; Colosi, P.; Podsakoff, G. M.; Read, M. S.; Bellinger, D. A.; Brinkhous, K. M.; Nichols, T.; Kurtzman, G. J.; High, K. A.
CORPORATE SOURCE: (1) Dep. Pathol., Univ. Pennsylvania, Children's Hosp.
Philadelphia, Philadelphia, PA USA
SOURCE: Journal of Investigative Medicine, (March, 1998) Vol. 46,
No. 3, pp. 215A.
Meeting Info.: Annual Meeting of the Association of American Physicians, American Society for Clinical Investigation, American Federation for Medical Research 1998 Biomedicine: Medical Research from Bench to Bedside
Washington, D.C., USA May 1-3, 1998 American Federation for
Medical Research
. ISSN: 1081-5589.
DOCUMENT TYPE: Conference
LANGUAGE: English

=> d ibib ab 18

L45 ANSWER 18 OF 38 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1999:402333 BIOSIS
DOCUMENT NUMBER: PREV199900402333
TITLE: Hepatic gene therapy using **adeno-associated** virus **vectors**.
AUTHOR(S): Patijn, Gijsbert A.; Kay, Mark A. (1)
CORPORATE SOURCE: (1) Dep. Pediatr. Genet., Univ. Sch. Medicine, 300 Pasteur
Drive, Room G305, Stanford, A 94305 USA
SOURCE: Seminars in Liver Disease, (1999) Vol. 19, No. 1, pp. 61-69.
ISSN: 0272-8087.
DOCUMENT TYPE: General Review
LANGUAGE: English

=> s l45 and liver
L46 7 L45 AND LIVER

=> d ti so 1-7

L46 ANSWER 1 OF 7 MEDLINE
TI Gene therapy for hemophilia.
SO Curr Opin Mol Ther, (1999 Aug) 1 (4) 493-9. Ref: 52
Journal code: 100891485. ISSN: 1464-8431.

L46 ANSWER 2 OF 7 MEDLINE
TI Sustained correction of bleeding disorder in hemophilia B mice by gene
therapy.
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF
AMERICA, (1999 Mar 30) 96 (7) 3906-10.
Journal code: 7505876. ISSN: 0027-8424.

L46 ANSWER 3 OF 7 MEDLINE
TI Correction of hemophilia B in **canine** and murine models using **recombinant adeno-associated** viral **vectors**.
SO NATURE MEDICINE, (1999 Jan) 5 (1) 64-70.
Journal code: 9502015. ISSN: 1078-8956.

L46 ANSWER 4 OF 7 MEDLINE
TI Persistent and therapeutic concentrations of human factor IX in mice after
hepatic gene transfer of recombinant AAV vectors.
SO NATURE GENETICS, (1997 Jul) 16 (3) 270-6.
Journal code: 9216904. ISSN: 1061-4036.

L46 ANSWER 5 OF 7 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Adeno-associated virus-mediated gene transfer of factor IX for treatment
of hemophilia B by gene therapy.
SO Thrombosis and Haemostasis, (Aug., 1999) Vol. 82, No. 2, pp. 540-546.
ISSN: 0340-6245.

L46 ANSWER 6 OF 7 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Hepatic gene therapy using **adeno-associated** virus
vectors.
SO Seminars in Liver Disease, (1999) Vol. 19, No. 1, pp. 61-69.
ISSN: 0272-8087.

L46 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2002 ACS
TI Gene therapy vectors carrying lipase genes for treatment of
lipoproteinemias
SO PCT Int. Appl., 40 pp.
CODEN: PIXXD2

=> d ibib ab 3

L46 ANSWER 3 OF 7 MEDLINE
ACCESSION NUMBER: 1999098310 MEDLINE
DOCUMENT NUMBER: 99098310 PubMed ID: 9883841
TITLE: Correction of hemophilia B in **canine** and murine models using **recombinant adeno-associated** viral **vectors**.
COMMENT: Comment in: Nat Med. 1999 Jan;5(1):21-2
AUTHOR: Snyder R O; Miao C; Meuse L; Tubb J; Donahue B A; Lin H F;
Stafford D W; Patel S; Thompson A R; Nichols T; Read M S;
Bellinger D A; Brinkhous K M; Kay M A
CORPORATE SOURCE: Cell Genesys Inc., Foster City, California 94404, USA.
CONTRACT NUMBER: HL01648 (NHLBI)
HL53682 (NHLBI)
SOURCE: NATURE MEDICINE, (1999 Jan) 5 (1) 64-70.
Journal code: 9502015. ISSN: 1078-8956.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199902
ENTRY DATE: Entered STN: 19990223
Last Updated on STN: 19990223
Entered Medline: 19990208
AB Hemophilia B, or factor IX deficiency, is an X-linked recessive disorder
occurring in about 1 in 25,000 males. Affected individuals are at risk for
spontaneous bleeding into many organs; treatment mainly consists of the
transfusion of clotting factor concentrates prepared from human blood or
recombinant sources after bleeding has started. Small- and large-animal
models have been developed and/or characterized that closely mimic the
human disease state. As a preclinical model for gene therapy,
recombinant adeno-associated viral
vectors containing the human or **canine** factor IX cDNAs
were infused into the **livers** of murine and **canine**
models of hemophilia B, respectively. There was no associated toxicity
with infusion in either animal model. Constitutive expression of factor IX
was observed, which resulted in the correction of the bleeding disorder
over a period of over 17 months in mice. Mice with a steady-state
concentration of 25% of the normal human level of factor IX had normal
coagulation. In hemophilic **dogs**, a dose of rAAV that was
approximately 1/10 per body weight that given to mice resulted in 1% of
normal **canine** factor IX levels, the absence of inhibitors, and a
sustained partial correction of the coagulation defect for at least 8
months.

=> d his

(FILE 'HOME' ENTERED AT 14:28:55 ON 19 JUN 2002)

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 14:29:05 ON 19 JUN 2002
L1 5751 S ADENO-ASSOCIATED
L2 1438993 S LIVER
L3 195 S L1(S)L2
L4 87 S L3 NOT PY>1999
L5 47 DUP REM L4 (40 DUPLICATES REMOVED)
L6 39542 S TRANSGENE
L7 12 S L6 AND L5
L8 122109 S EDTA
L9 7 S L1 AND L8
L10 5 DUP REM L9 (2 DUPLICATES REMOVED)
L11 594168 S DOG
L12 48 S L1(S)L11
L13 31 DUP REM L12 (17 DUPLICATES REMOVED)
L14 10 S L13 NOT PY>1999

FILE 'REGISTRY' ENTERED AT 14:48:51 ON 19 JUN 2002
E "MG132"/CN 25
E "MG-132"/CN 25
E "CALPAIN INHIBITOR"/CN 25
L15 3 S E4 OR E5 OR E6
E "CALPAIN INHIBITOR"/CN 25
E "LLNL"/CN 25
E "MG115"/CN 25
E "N-BENZYLOXY-CARBONYL-ISO"/CN 25

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 14:53:04 ON 19 JUN 2002
L16 366 S L-LEUCINAMIDE
L17 365 S CALPAIN INHIBITOR I
L18 119 S CALPAIN INHIBITOR II
L19 7 S CALPAIN INHIBITOR III
L20 727 S MG132
L21 952 S LLNL
L22 84 S MG115
L23 67122 S PSI
L24 192 S N-BENZYLOXY-CARBONYL
L25 0 S L1 AND L16
L26 1 S L1 AND L17
L27 0 S L1 AND L18
L28 0 S L1 AND L19
L29 1 S L1 AND L20
L30 0 S L1 AND L21
L31 0 S L1 AND L22
L32 11 S L1 AND L23
L33 9 DUP REM L32 (2 DUPLICATES REMOVED)
L34 0 S L1 AND L24
L35 120514 S CANINE
L36 90 S L1 AND L35
L37 10 S L36 AND L6
L38 6 DUP REM L37 (4 DUPLICATES REMOVED)

L39 1279 S RECOMBINANT ADENO-ASSOCIATED
L40 3514 S ADENO-ASSOCIATED(S)VECTOR
L41 3731 S L39 OR L40
L42 646328 S L11 OR L35
L43 117 S L41 AND L42
L44 79 DUP REM L43 (38 DUPLICATES REMOVED)
L45 38 S L44 NOT PY>1999
L46 7 S L45 AND LIVER

=> s rat
L47 3416653 RAT

=> s l47 and l41
L48 552 L47 AND L41

=> s (enhanc? or improv? or augment? or increas? or induc?)(s)transduction
L49 68324 (ENHANC? OR IMPROV? OR AUGMENT? OR INCREAS? OR INDUC?)(S) TRANSD
UCTION

=> s l48 and l49
L50 96 L48 AND L49

=> dup rem l50
PROCESSING COMPLETED FOR L50
L51 55 DUP REM L50 (41 DUPLICATES REMOVED)

=> s l50 not py>1999
L52 47 L50 NOT PY>1999

=> d ti so 1-47

L52 ANSWER 1 OF 47 MEDLINE
TI Gene therapy in the inner ear. Mechanisms and clinical implications.
SO ANNALS OF THE NEW YORK ACADEMY OF SCIENCES, (1999 Nov 28) 884 345-60.
Ref: 27
Journal code: 7506858. ISSN: 0077-8923.

L52 ANSWER 2 OF 47 MEDLINE
TI Prevention of 6-hydroxydopamine-induced rotational behavior by BDNF
somatic gene transfer.
SO BRAIN RESEARCH, (1999 Nov 20) 847 (2) 314-20.
Journal code: 0045503. ISSN: 0006-8993.

L52 ANSWER 3 OF 47 MEDLINE
TI Neuronal-specific and nerve growth factor-inducible expression directed by
the preprotachykinin-A promoter delivered by an **adeno-associated** virus **vector**.
SO NEUROSCIENCE, (1999) 94 (3) 997-1003.
Journal code: 7605074. ISSN: 0306-4522.

L52 ANSWER 4 OF 47 MEDLINE
TI Gene transfer to the nigrostriatal system by hybrid herpes simplex virus/
adeno-associated virus amplicon **vectors**.
SO HUMAN GENE THERAPY, (1999 Oct 10) 10 (15) 2481-94.
Journal code: 9008950. ISSN: 1043-0342.

L52 ANSWER 5 OF 47 MEDLINE
TI bcl-2 gene therapy exacerbates excitotoxicity.
SO HUMAN GENE THERAPY, (1999 Jul 1) 10 (10) 1715-20.
Journal code: 9008950. ISSN: 1043-0342.

L52 ANSWER 6 OF 47 MEDLINE
TI Long-term restoration of striatal L-aromatic amino acid decarboxylase
activity using **recombinant adeno-associated** viral **vector** gene transfer in a rodent model of Parkinson's disease.
SO NEUROSCIENCE, (1999) 92 (1) 185-96.
Journal code: 7605074. ISSN: 0306-4522.

L52 ANSWER 7 OF 47 MEDLINE
TI Generation of aberrant sprouting in the adult **rat** brain by GAP-43 somatic gene transfer.
SO BRAIN RESEARCH, (1999 Jun 19) 832 (1-2) 136-44.
Journal code: 0045503. ISSN: 0006-8993.

L52 ANSWER 8 OF 47 MEDLINE
TI Stable restoration of the sarcoglycan complex in dystrophic muscle perfused with histamine and a **recombinant adeno-associated** viral **vector**.
SO NATURE MEDICINE, (1999 Apr) 5 (4) 439-43.
Journal code: 9502015. ISSN: 1078-8956.

L52 ANSWER 9 OF 47 MEDLINE
TI Disease-inducible transgene expression from a **recombinant adeno-associated** virus **vector** in a **rat** arthritis model.
SO JOURNAL OF VIROLOGY, (1999 Apr) 73 (4) 3410-7.
Journal code: 0113724. ISSN: 0022-538X.

L52 ANSWER 10 OF 47 MEDLINE
TI Antisense inhibition of AT1 receptor in vascular smooth muscle cells using
adeno-associated virus-based **vector**.
SO HYPERTENSION, (1999 Jan) 33 (1 Pt 2) 354-9.
Journal code: 7906255. ISSN: 0194-911X.

L52 ANSWER 11 OF 47 MEDLINE
TI Behavioral recovery in 6-hydroxydopamine-lesioned **rats** by cotransduction of striatum with tyrosine hydroxylase and aromatic L-amino
acid decarboxylase genes using two separate **adeno-associated** virus **vectors**.
SO HUMAN GENE THERAPY, (1998 Nov 20) 9 (17) 2527-35.
Journal code: 9008950. ISSN: 1043-0342.

L52 ANSWER 12 OF 47 MEDLINE
TI Characterization of intrastriatal **recombinant adeno-associated** virus-mediated gene transfer of human tyrosine hydroxylase and human GTP-cyclohydrolase I in a **rat** model of Parkinson's disease.
SO JOURNAL OF NEUROSCIENCE, (1998 Jun 1) 18 (11) 4271-84.
Journal code: 8102140. ISSN: 0270-6474.

L52 ANSWER 13 OF 47 MEDLINE
TI Factors influencing **recombinant adeno-associated** virus production.
SO HUMAN GENE THERAPY, (1998 Mar 20) 9 (5) 695-706.
Journal code: 9008950. ISSN: 1043-0342.

L52 ANSWER 14 OF 47 MEDLINE
TI Neuron-specific transduction in the **rat** septohippocampal or nigrostriatal pathway by **recombinant adeno-associated** virus **vectors**.
SO EXPERIMENTAL NEUROLOGY, (1998 Apr) 150 (2) 183-94.
Journal code: 0370712. ISSN: 0014-4886.

L52 ANSWER 15 OF 47 MEDLINE
TI Characterization of **recombinant adeno-associated** virus-2 as a vehicle for gene delivery and expression into vascular cells.
SO JOURNAL OF INVESTIGATIVE MEDICINE, (1997 Feb) 45 (2) 87-98.
Journal code: 9501229. ISSN: 1081-5589.

L52 ANSWER 16 OF 47 MEDLINE
TI **Adeno-associated** virus **vectors** for vascular gene delivery.
SO CIRCULATION RESEARCH, (1997 Apr) 80 (4) 497-505.
Journal code: 0047103. ISSN: 0009-7330.

L52 ANSWER 17 OF 47 MEDLINE

TI Efficient transduction of green fluorescent protein in spinal cord neurons
using **adeno-associated** virus **vectors**
containing cell type-specific promoters.
SO GENE THERAPY, (1997 Jan) 4 (1) 16-24.
Journal code: 9421525. ISSN: 0969-7128.

L52 ANSWER 18 OF 47 MEDLINE
TI Persistent expression of human clotting factor IX from mouse liver after
intravenous injection of **adeno-associated** virus
vectors.
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF
AMERICA, (1997 Feb 18) 94 (4) 1426-31.
Journal code: 7505876. ISSN: 0027-8424.

L52 ANSWER 19 OF 47 MEDLINE
TI **Recombinant adeno-associated** virus mediates
a high level of gene transfer but less efficient integration in the K562 human hematopoietic cell line.
SO JOURNAL OF VIROLOGY, (1997 Mar) 71 (3) 1776-83.
Journal code: 0113724. ISSN: 0022-538X.

L52 ANSWER 20 OF 47 MEDLINE
TI Effects of gamma irradiation on the transduction of dividing and nondividing cells in brain and muscle of **rats** by **adeno -associated** virus **vectors**.
SO HUMAN GENE THERAPY, (1996 May 1) 7 (7) 841-50.
Journal code: 9008950. ISSN: 1043-0342.

L52 ANSWER 21 OF 47 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Prevention of 6-hydroxydopamine-induced rotational behavior by BDNF
somatic gene transfer.
SO Brain Research, (Nov. 20, 1999) Vol. 847, No. 2, pp. 314-320.
ISSN: 0006-8993.

L52 ANSWER 22 OF 47 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Neuronal-specific and nerve growth factor-inducible expression directed by
the preprotachykinin-A promoter delivered by an **adeno-associated** virus **vector**.
SO Neuroscience, (Oct. 11, 1999) Vol. 94, No. 3, pp. 997-1003.
ISSN: 0306-4522.

L52 ANSWER 23 OF 47 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Gene transfer to the nigrostriatal system by hybrid herpes simplex virus/
adeno-associated virus amplicon **vectors**.
SO Human Gene Therapy, (Oct. 10, 1999) Vol. 10, No. 15, pp. 2481-2494.
ISSN: 1043-0342.

L52 ANSWER 24 OF 47 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI bcl-2 gene therapy exacerbates excitotoxicity.
SO Human Gene Therapy, (July 1, 1999) Vol. 10, No. 10, pp. 1715-1720.
ISSN: 1043-0342.

L52 ANSWER 25 OF 47 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Generation of aberrant sprouting in the adult **rat** brain by GAP-43 somatic gene transfer.
SO Brain Research, (June 19, 1999) Vol. 832, No. 1-2, pp. 136-144.
ISSN: 0006-8993.

L52 ANSWER 26 OF 47 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Long-term restoration of striatal L-aromatic amino acid decarboxylase
activity using **recombinant adeno-associated** viral **vector** gene transfer in a rodent model of Parkinson's disease.
SO Neuroscience, (May 20, 1999) Vol. 92, No. 1, pp. 185-196.
ISSN: 0306-4522.

L52 ANSWER 27 OF 47 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Cellular contaminants of **adeno-associated** virus **vector** stocks can **enhance transduction**.
SO Gene Therapy, (June, 1999) Vol. 6, No. 6, pp. 1045-1053.
ISSN: 0969-7128.

L52 ANSWER 28 OF 47 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Strategies for gene therapy of Parkinson's disease using **adeno-associated** virus (AAV) **vectors**.
SO Biogenic Amines, (1999) Vol. 15, No. 1, pp. 21-37.
ISSN: 0168-8561.

L52 ANSWER 29 OF 47 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Disease-inducible transgene expression from a **recombinant adeno-associated** virus **vector** in a **rat** arthritis model.
SO Journal of Virology, (April, 1999) Vol. 73, No. 4, pp. 3410-3417.
ISSN: 0022-538X.

L52 ANSWER 30 OF 47 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Antisense inhibition of AT1 receptor in vascular smooth muscle cells using
adeno-associated virus-based **vector**.
SO Hypertension (Baltimore), (Jan., 1999) Vol. 33, No. 1 PART 2, pp. 354-359.
ISSN: 0194-911X.

L52 ANSWER 31 OF 47 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Adeno-associated virus-mediated gene transfer to the brain: Duration and
modulation of expression.
SO Human Gene Therapy, (Jan. 20, 1999) Vol. 10, No. 2, pp. 201-213.
ISSN: 1043-0342.

L52 ANSWER 32 OF 47 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Adenoassociated virus-mediated transfer of a functional water channel into
salivary epithelial cells in vitro and in vivo.
SO Human Gene Therapy, (Dec. 10, 1998) Vol. 9, No. 18, pp. 2777-2785.
ISSN: 1043-0342.

L52 ANSWER 33 OF 47 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Behavioral recovery in 6-hydroxydopamine-lesioned **rats** by cotransduction of striatum with tyrosine hydroxylase and aromatic L-amino
acid decarboxylase genes using two separate **adeno-associated** virus **vectors**.
SO Human Gene Therapy, (Nov. 20, 1998) Vol. 9, No. 17, pp. 2527-2535.
ISSN: 1043-0342.

L52 ANSWER 34 OF 47 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Characterization of intrastriatal **recombinant adeno-associated** virus-mediated gene transfer of human tyrosine hydroxylase and human GTP-cyclohydrolase I in a **rat** model of Parkinson's disease.
SO Journal of Neuroscience, (June 1, 1998) Vol. 18, No. 11, pp. 4271-4284.

ISSN: 0270-6474.

L52 ANSWER 35 OF 47 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Neuron-specific transduction in the **rat** septohippocampal or nigrostriatal pathway by **recombinant adeno-associated** virus **vectors**.
SO Experimental Neurology, (April, 1998) Vol. 150, No. 2, pp. 183-194.
ISSN: 0014-4886.

L52 ANSWER 36 OF 47 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Gene transfer by **adeno-associated** virus **vectors** into the central nervous system.
SO Experimental Neurology, (1997) Vol. 144, No. 1, pp. 113-124.
ISSN: 0014-4886.

L52 ANSWER 37 OF 47 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Characterization of **recombinant adeno-associated** virus-2 as a vehicle for gene delivery and expression into vascular cells.
SO Journal of Investigative Medicine, (1997) Vol. 45, No. 2, pp. 87-98.
ISSN: 1081-5589.

L52 ANSWER 38 OF 47 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI **Recombinant adeno-associated** virus mediates a high level of gene transfer but less efficient integration in the K562 human hematopoietic cell line.
SO Journal of Virology, (1997) Vol. 71, No. 3, pp. 1776-1783.
ISSN: 0022-538X.

L52 ANSWER 39 OF 47 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Efficient transduction of green fluorescent protein in spinal cord neurons using **adeno-associated** virus **vectors** containing cell type-specific promoters.
SO Gene Therapy, (1997) Vol. 4, No. 1, pp. 16-24.
ISSN: 0969-7128.

L52 ANSWER 40 OF 47 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Comparison of promoter strengths on gene delivery into mammalian brain cells using AAV vectors.
SO Gene Therapy, (1996) Vol. 3, No. 5, pp. 437-447.
ISSN: 0969-7128.

L52 ANSWER 41 OF 47 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Sodium butyrate greatly **enhances** the efficiency of viral **transduction** in adult ventricular cardiomyocytes by **adeno-associated** viral **vectors**.
SO Circulation, (1995) Vol. 92, No. 8 SUPPL., pp. I296.
Meeting Info.: 68th Scientific Session of the American Heart Association
Anaheim, California, USA November 13-16, 1995
ISSN: 0009-7322.

L52 ANSWER 42 OF 47 CAPLUS COPYRIGHT 2002 ACS
TI Cellular contaminants of **adeno-associated** virus **vector** stocks can **enhance transduction**
SO Gene Therapy (1999), 6(6), 1045-1053
CODEN: GETHEC; ISSN: 0969-7128

L52 ANSWER 43 OF 47 CAPLUS COPYRIGHT 2002 ACS
TI Generation of aberrant sprouting in the adult **rat** brain by GAP-43 somatic gene transfer
SO Brain Research (1999), 832(1,2), 136-144
CODEN: BRREAP; ISSN: 0006-8993

L52 ANSWER 44 OF 47 CAPLUS COPYRIGHT 2002 ACS
TI Disease-inducible transgene expression from a **recombinant adeno-associated** virus **vector** in a **rat** arthritis model
SO Journal of Virology (1999), 73(4), 3410-3417
CODEN: JOVIAM; ISSN: 0022-538X

L52 ANSWER 45 OF 47 CAPLUS COPYRIGHT 2002 ACS
TI Adenoassociated virus-mediated transfer of a functional water channel into salivary epithelial cells in vitro and in vivo
SO Human Gene Therapy (1998), 9(18), 2777-2785
CODEN: HGTHE3; ISSN: 1043-0342

L52 ANSWER 46 OF 47 CAPLUS COPYRIGHT 2002 ACS
TI Gene therapy of a rodent model of Parkinson's disease using **adeno-associated** virus (AAV) **vectors**
SO Advances in Behavioral Biology (1998), 49(Progress in Alzheimer's and Parkinson's Diseases), 647-652
CODEN: ADBBBW; ISSN: 0099-6246

L52 ANSWER 47 OF 47 CAPLUS COPYRIGHT 2002 ACS
TI Effects of gamma irradiation on the transduction of dividing and nondividing cells in brain and muscle of **rats** by **adeno-associated** virus **vectors**
SO Hum. Gene Ther. (1996), 7(7), 841-850
CODEN: HGTHE3; ISSN: 1043-0342

=> dup rem l52
PROCESSING COMPLETED FOR L52
L53 28 DUP REM L52 (19 DUPLICATES REMOVED)

=> d ti so 1-28

L53 ANSWER 1 OF 28 MEDLINE DUPLICATE 1
TI Disease-inducible transgene expression from a **recombinant adeno-associated** virus **vector** in a **rat** arthritis model.
SO JOURNAL OF VIROLOGY, (1999 Apr) 73 (4) 3410-7.
Journal code: 0113724. ISSN: 0022-538X.

L53 ANSWER 2 OF 28 MEDLINE DUPLICATE 2
TI Gene transfer to the nigrostriatal system by hybrid herpes simplex virus/ **adeno-associated** virus amplicon **vectors**.
SO HUMAN GENE THERAPY, (1999 Oct 10) 10 (15) 2481-94.
Journal code: 9008950. ISSN: 1043-0342.

L53 ANSWER 3 OF 28 MEDLINE DUPLICATE 3
TI bcl-2 gene therapy exacerbates excitotoxicity.
SO HUMAN GENE THERAPY, (1999 Jul 1) 10 (10) 1715-20.
Journal code: 9008950. ISSN: 1043-0342.

L53 ANSWER 4 OF 28 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 4
TI Cellular contaminants of **adeno-associated** virus **vector** stocks can **enhance transduction**.
SO Gene Therapy, (June, 1999) Vol. 6, No. 6, pp. 1045-1053.
ISSN: 0969-7128.

L53 ANSWER 5 OF 28 MEDLINE DUPLICATE 5
TI Neuronal-specific and nerve growth factor-inducible expression directed by the preprotachykinin-A promoter delivered by an **adeno-associated** virus **vector**.
SO NEUROSCIENCE, (1999) 94 (3) 997-1003.
Journal code: 7605074. ISSN: 0306-4522.

L53 ANSWER 6 OF 28 MEDLINE
TI Stable restoration of the sarcoglycan complex in dystrophic muscle perfused with histamine and a **recombinant adeno-**

associated viral **vector**.
SO NATURE MEDICINE, (1999 Apr) 5 (4) 439-43.
Journal code: 9502015. ISSN: 1078-8956.

L53 ANSWER 7 OF 28 MEDLINE DUPLICATE 6
TI Antisense inhibition of AT1 receptor in vascular smooth muscle cells using
adeno-associated virus-based **vector**.
SO HYPERTENSION, (1999 Jan) 33 (1 Pt 2) 354-9.
Journal code: 7906255. ISSN: 0194-911X.

L53 ANSWER 8 OF 28 MEDLINE
TI Gene therapy in the inner ear. Mechanisms and clinical implications.
SO ANNALS OF THE NEW YORK ACADEMY OF SCIENCES, (1999 Nov 28) 884 345-60.
Ref: 27
Journal code: 7506858. ISSN: 0077-8923.

L53 ANSWER 9 OF 28 MEDLINE DUPLICATE 7
TI Prevention of 6-hydroxydopamine-induced rotational behavior by BDNF
somatic gene transfer.
SO BRAIN RESEARCH, (1999 Nov 20) 847 (2) 314-20.
Journal code: 0045503. ISSN: 0006-8993.

L53 ANSWER 10 OF 28 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Adeno-associated virus-mediated gene transfer to the brain: Duration and
modulation of expression.
SO Human Gene Therapy, (Jan. 20, 1999) Vol. 10, No. 2, pp. 201-213.
ISSN: 1043-0342.

L53 ANSWER 11 OF 28 MEDLINE DUPLICATE 8
TI Long-term restoration of striatal L-aromatic amino acid decarboxylase
activity using **recombinant adeno-associated**
viral **vector** gene transfer in a rodent model of Parkinson's disease.
SO NEUROSCIENCE, (1999) 92 (1) 185-96.
Journal code: 7605074. ISSN: 0306-4522.

L53 ANSWER 12 OF 28 MEDLINE DUPLICATE 9
TI Generation of aberrant sprouting in the adult **rat** brain by GAP-43 somatic gene transfer.
SO BRAIN RESEARCH, (1999 Jun 19) 832 (1-2) 136-44.
Journal code: 0045503. ISSN: 0006-8993.

L53 ANSWER 13 OF 28 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Strategies for gene therapy of Parkinson's disease using **adeno-associated** virus (AAV) **vectors**.
SO Biogenic Amines, (1999) Vol. 15, No. 1, pp. 21-37.
ISSN: 0168-8561.

L53 ANSWER 14 OF 28 MEDLINE DUPLICATE 10
TI Characterization of intrastriatal **recombinant adeno-associated** virus-mediated gene transfer of human tyrosine hydroxylase and human GTP-cyclohydrolase I in a **rat** model of Parkinson's disease.
SO JOURNAL OF NEUROSCIENCE, (1998 Jun 1) 18 (11) 4271-84.
Journal code: 8102140. ISSN: 0270-6474.

L53 ANSWER 15 OF 28 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
11
TI Adenoassociated virus-mediated transfer of a functional water channel into
salivary epithelial cells in vitro and in vivo.
SO Human Gene Therapy, (Dec. 10, 1998) Vol. 9, No. 18, pp. 2777-2785.
ISSN: 1043-0342.

L53 ANSWER 16 OF 28 MEDLINE DUPLICATE 12
TI Behavioral recovery in 6-hydroxydopamine-lesioned **rats** by cotransduction of striatum with tyrosine hydroxylase and aromatic L-amino
acid decarboxylase genes using two separate **adeno-associated** virus **vectors**.
SO HUMAN GENE THERAPY, (1998 Nov 20) 9 (17) 2527-35.
Journal code: 9008950. ISSN: 1043-0342.

L53 ANSWER 17 OF 28 MEDLINE
TI Factors influencing **recombinant adeno-associated** virus production.
SO HUMAN GENE THERAPY, (1998 Mar 20) 9 (5) 695-706.
Journal code: 9008950. ISSN: 1043-0342.

L53 ANSWER 18 OF 28 CAPLUS COPYRIGHT 2002 ACS
TI Gene therapy of a rodent model of Parkinson's disease using **adeno-associated** virus (AAV) **vectors**
SO Advances in Behavioral Biology (1998), 49(Progress in Alzheimer's and
Parkinson's Diseases), 647-652
CODEN: ADBBBW; ISSN: 0099-6246

L53 ANSWER 19 OF 28 MEDLINE DUPLICATE 13
TI Neuron-specific transduction in the **rat** septohippocampal or nigrostriatal pathway by **recombinant adeno-associated** virus **vectors**.
SO EXPERIMENTAL NEUROLOGY, (1998 Apr) 150 (2) 183-94.
Journal code: 0370712. ISSN: 0014-4886.

L53 ANSWER 20 OF 28 MEDLINE DUPLICATE 14
TI **Recombinant adeno-associated** virus mediates
a high level of gene transfer but less efficient integration in the K562 human hematopoietic cell line.
SO JOURNAL OF VIROLOGY, (1997 Mar) 71 (3) 1776-83.
Journal code: 0113724. ISSN: 0022-538X.

L53 ANSWER 21 OF 28 MEDLINE
TI Persistent expression of human clotting factor IX from mouse liver after
intravenous injection of **adeno-associated** virus **vectors**.
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF
AMERICA, (1997 Feb 18) 94 (4) 1426-31.
Journal code: 7505876. ISSN: 0027-8424.

L53 ANSWER 22 OF 28 MEDLINE
TI **Adeno-associated** virus **vectors** for vascular
gene delivery.
SO CIRCULATION RESEARCH, (1997 Apr) 80 (4) 497-505.
Journal code: 0047103. ISSN: 0009-7330.

L53 ANSWER 23 OF 28 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Gene transfer by **adeno-associated** virus
vectors into the central nervous system.
SO Experimental Neurology, (1997) Vol. 144, No. 1, pp. 113-124.
ISSN: 0014-4886.

L53 ANSWER 24 OF 28 MEDLINE DUPLICATE 15
TI Characterization of **recombinant adeno-associated** virus-2 as a vehicle for gene delivery and expression into vascular cells.
SO JOURNAL OF INVESTIGATIVE MEDICINE, (1997 Feb) 45 (2) 87-98.
Journal code: 9501229. ISSN: 1081-5589.

L53 ANSWER 25 OF 28 MEDLINE DUPLICATE 16
TI Efficient transduction of green fluorescent protein in spinal cord neurons
using **adeno-associated** virus **vectors**
containing cell type-specific promoters.
SO GENE THERAPY, (1997 Jan) 4 (1) 16-24.
Journal code: 9421525. ISSN: 0969-7128.

L53 ANSWER 26 OF 28 MEDLINE DUPLICATE 17
TI Effects of gamma irradiation on the transduction of dividing and nondividing cells in brain and muscle of **rats** by **adeno-associated** virus **vectors**.
SO HUMAN GENE THERAPY, (1996 May 1) 7 (7) 841-50.
Journal code: 9008950. ISSN: 1043-0342.

L53 ANSWER 27 OF 28 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Comparison of promoter strengths on gene delivery into mammalian brain cells using AAV vectors.
SO Gene Therapy, (1996) Vol. 3, No. 5, pp. 437-447.
ISSN: 0969-7128.

L53 ANSWER 28 OF 28 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Sodium butyrate greatly **enhances** the efficiency of viral **transduction** in adult ventricular cardiomyocytes by **adeno-associated** viral **vectors**.
SO Circulation, (1995) Vol. 92, No. 8 SUPPL., pp. I296.
Meeting Info.: 68th Scientific Session of the American Heart Association
Anaheim, California, USA November 13-16, 1995
ISSN: 0009-7322.

=> d ibib ab 28,17,4

L53 ANSWER 28 OF 28 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1996:11748 BIOSIS
DOCUMENT NUMBER: PREV199698583883
TITLE: Sodium butyrate greatly **enhances** the efficiency of viral **transduction** in adult ventricular cardiomyocytes by **adeno-associated** viral **vectors**.
AUTHOR(S): Kessler, Paul D. (1); Matelis, Laura A.; Wei, Shao-Kui; Silverman, Howard S.; Flotte, Terry R.; Kurtzman, Gary J.; Byrne, Barry J.
CORPORATE SOURCE: (1) Dep. Med., Johns Hopkins Univ., Baltimore, MD USA
SOURCE: Circulation, (1995) Vol. 92, No. 8 SUPPL., pp. I296. Meeting Info.: 68th Scientific Session of the American Heart Association Anaheim, California, USA November 13-16, 1995
ISSN: 0009-7322.
DOCUMENT TYPE: Conference
LANGUAGE: English

L53 ANSWER 17 OF 28 MEDLINE
ACCESSION NUMBER: 1998211339 MEDLINE
DOCUMENT NUMBER: 98211339 PubMed ID: 9551617
TITLE: Factors influencing **recombinant adeno-associated** virus production.
AUTHOR: Salvetti A; Oreve S; Chadeuf G; Favre D; Cherel Y; Champion-Arnaud P; David-Ameline J; Moullier P
CORPORATE SOURCE: Laboratoire de Therapie Genique, CHU Hotel-DIEU, Nantes, France.
SOURCE: HUMAN GENE THERAPY, (1998 Mar 20) 9 (5) 695-706.
Journal code: 9008950. ISSN: 1043-0342.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199805
ENTRY DATE: Entered STN: 19980611
Last Updated on STN: 19980611
Entered Medline: 19980529

AB **Recombinant adeno-associated** virus (rAAV) is produced by transfecting cells with two constructs: the rAAV **vector** plasmid and the rep-cap plasmid. After subsequent adenoviral infection, needed for rAAV replication and assembly, the virus is purified from total cell lysates through CsCl gradients. Because this is a long and complex procedure, the precise titration of rAAV stocks, as well as the measure of the level of contamination with adenovirus and rep-positive AAV, are essential to evaluate the **transduction** efficiency of these **vectors** in vitro and in vivo. Our **vector** core is in charge of producing rAAV for outside investigators as part of a national network promoted by the Association Francaise contre les Myopathies/Genethon. We report here the characterization of 18 large-scale rAAV stocks produced during the past year. Three major **improvements** were introduced and combined in the rAAV production procedure: (i) the titration and characterization of rAAV stocks using a stable rep-cap HeLa cell line in a modified Replication Center Assay (RCA); (ii) the use of different rep-cap constructs to provide AAV regulatory and structural proteins; (iii) the use of an adenoviral plasmid to provide helper functions needed for rAAV replication and assembly. Our results indicate that: (i) rAAV yields ranged between 10(11) to 5 x 10(12) total particles; (ii) the physical particle to infectious particle (measured by RCA) ratios were consistently below 50 when using a rep-cap plasmid harboring an ITR-deleted AAV genome; the physical particle to transducing particle ratios ranged between 400 and 600; (iii) the use of an adenoviral plasmid instead of an infectious virion did not affect the particles or the infectious particles yields nor the above ratio. Most of large-scale rAAV stocks (7/9) produced using this plasmid were free of detectable infectious adenovirus as determined by RCA; (iv) all the rAAV stocks were contaminated with rep-positive AAV as detected by RCA. In summary, this study describes a general method to titrate rAAV, independently of the transgene and its expression, and to measure the level of contamination with adenovirus and rep-positive AAV. Furthermore, we report a new production procedure using adenoviral plasmids instead of virions and resulting in rAAV stocks with undetectable adenovirus contamination.

L53 ANSWER 4 OF 28 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 4
ACCESSION NUMBER: 1999:300229 BIOSIS
DOCUMENT NUMBER: PREV199900300229
TITLE: Cellular contaminants of **adeno-associated** virus **vector** stocks can **enhance transduction**.
AUTHOR(S): Tenenbaum, L. (1); Hamdane, M.; Pouzet, M.; Avalosse, B.; Stathopoulos, A.; Jurysta, F.; Rosenbaum, C.; Hanemann, C. O.; Levivier, M.; Velu, T.
CORPORATE SOURCE: (1) IRIBHN, Universite Libre de Bruxelles 808, Route de Lennik, Bat C, Campus Erasme, B-1070, Brussels Belgium
SOURCE: Gene Therapy, (June, 1999) Vol. 6, No. 6, pp. 1045-1053.
ISSN: 0969-7128.
DOCUMENT TYPE: Article

LANGUAGE: English
SUMMARY LANGUAGE: English
AB **Transduction** efficiency of different types of recombinant (r)AAV-2 based vectors preparations markedly differed, with apparently no correlation with the replicative titers. Using HeLa cells as target for **transduction**, 105 and 30 infectious units were necessary to observe one transductant using respectively cesium-chloride-purified rAAV and crude lysates of producer cells obtained by sonication. The purified vectors were however able to transduce HEK-193 cells efficiently, but transgene expression was detected with some delay compared with crude lysates. The unexpected high **transduction** efficiency of sonicated crude lysates was due to virally mediated gene transfer, since similar sonicated crude lysates, but with no AAV rep and cap genes, did not lead to detection of transgene products after incubation with HeLa cells. Furthermore, sonicated cellular extracts of 293 or 293/T cells given in trans stimulate **transduction** of HeLa cells by purified rAAV. In contrast, neither extracts from the adenovirus E1-transformed 911 cell line, nor from other cell lines not harboring any adenovirus gene, had **enhancing** effect on rAAV-mediated **transduction**. These data suggest that 293 sonicated extracts contain factors which stimulate rAAV-mediated **transduction** of cells that are normally poorly transduced and offer a system to identify such factors and to characterize further the steps limiting the transfer of gene by AAV vectors.

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NEWS 6 Mar 08 Gene Names now available in BIOSIS
NEWS 7 Mar 22 TOXLIT no longer available
NEWS 8 Mar 22 TRCTHERMO no longer available
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NEWS 20 Jun 10 MEDLINE Reload
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=> s endosomal protease inhibitor
2694 ENDOSOMAL
70065 PROTEASE
25528 PROTEASES
81531 PROTEASE
(PROTEASE OR PROTEASES)
382334 INHIBITOR
403637 INHIBITORS
622534 INHIBITOR
(INHIBITOR OR INHIBITORS)
L1 1 ENDOSOMAL PROTEASE INHIBITOR
(ENDOSOMAL(W)PROTEASE(W)INHIBITOR)

=> d ti so

L1 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS
TI Processing of endogenously synthesized hen egg-white lysozyme retained in
the endoplasmic reticulum or in secretory form gives rise to a similar but
not identical set of epitopes recognized by class II-restricted T cells
SO J. Immunol. (1993), 151(7), 3576-86
CODEN: JOIMA3; ISSN: 0022-1767

=> d ibib ab

L1 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1994:28871 CAPLUS
DOCUMENT NUMBER: 120:28871
TITLE: Processing of endogenously synthesized hen egg-white lysozyme retained in the endoplasmic reticulum or in secretory form gives rise to a similar but not identical set of epitopes recognized by class II-restricted T cells
AUTHOR(S): Adorini, Luciano; Guery, Jean Charles; Fuchs, Serge; Ortiz-Navarrete, Vianney; Haemmerling, Gunter J.; Momburg, Frank
CORPORATE SOURCE: Preclin. Res., Sandoz Pharma Ltd., Basel, CH-4002, Switz.
SOURCE: J. Immunol. (1993), 151(7), 3576-86
CODEN: JOIMA3; ISSN: 0022-1767
DOCUMENT TYPE: Journal
LANGUAGE: English
AB To study the processing and presentation of endogenously synthesized Ag to class II MHC-restricted T cells, hen egg lysozyme (HEL), either tagged with a peptide that confers retention in the endoplasmic reticulum (HEL.KDEL), or in the secretory form (HELs), was stably expressed in LK-35.2 B hybridoma cells. Presentation of HEL peptides bound to class II mols. was assessed by activation of specific T cell hybridomas recognizing seven different epitopes derived from exogenous HEL. The presentation of endogenously synthesized HEL was not caused by reuptake of secreted or shed Ag. All the HEL epitopes examd. were efficiently presented after processing of endogenous HEL by HELs-transfected LK-35.2 cells. Processing of HEL tagged with KDEL, however, gave rise to presentation of only six of the seven HEL epitopes. The epitope included in the HEL sequence 112-124 was not presented by HEL.KDEL-transfected B cells. In addn., two of the four T cell hybridomas recognizing HEL 116-129 together with I-Ak mols. were not activated by HEL.KDEL, and three other epitopes were presented with lower efficiency as compared with HELs. Thus, endogenously synthesized HEL in secretory form gives rise to a set of class II-binding epitopes indistinguishable from exogenous HEL, whereas endoplasmic reticulum-retained HEL generates a similar but not identical set of epitopes. The **endosomal protease inhibitor** leupeptin prevented presentation of the epitope 108-116, but not 46-61, both by HELs and HEL.KDEL transfected cells, indicating a requirement for endosomal processing in both cases. In addn., the presentation of peptides derived from endogenously synthesized, either secretory or endoplasmic reticulum-retained HEL, could be inhibited by lysosomotropic amines, further indicating that the intracellular route of class II mols. presenting peptides derived from endogenous Ag intersects the acidic endosomal compartment.

=> s endosomal protease
2694 ENDOSOMAL
70065 PROTEASE
25528 PROTEASES
81531 PROTEASE
(PROTEASE OR PROTEASES)
L2 20 ENDOSOMAL PROTEASE
(ENDOSOMAL(W)PROTEASE)

=> d ti so 1-20

L2 ANSWER 1 OF 20 CAPLUS COPYRIGHT 2002 ACS
TI Proteases, natural inhibitors of protease, and activation of antigen processing in dendritic cells
SO Pathologie Biologie (2001), 49(6), 494-495
CODEN: PTBIAN; ISSN: 0031-3009

L2 ANSWER 2 OF 20 CAPLUS COPYRIGHT 2002 ACS
TI LUV1p/RKI1p/TCS3p/VPS54p, a yeast protein that localizes to the late golgi and early endosome, is required for normal vacuolar morphology
SO Molecular Biology of the Cell (2000), 11(7), 2429-2443
CODEN: MBCEEV; ISSN: 1059-1524

L2 ANSWER 3 OF 20 CAPLUS COPYRIGHT 2002 ACS

TI Alternative proteolytic processing of mouse mammary tumor virus superantigens
SO Journal of Virology (2000), 74(7), 3067-3073
CODEN: JOVIAM; ISSN: 0022-538X

L2 ANSWER 4 OF 20 CAPLUS COPYRIGHT 2002 ACS
TI Cathepsins and compartmentalization in antigen presentation
SO Current Opinion in Immunology (2000), 12(1), 107-113
CODEN: COPIEL; ISSN: 0952-7915

L2 ANSWER 5 OF 20 CAPLUS COPYRIGHT 2002 ACS
TI Negative regulation of epidermal growth factor signaling by selective
proteolytic mechanisms in the endosome mediated by cathepsin B
SO Journal of Biological Chemistry (1999), 274(47), 33723-33731
CODEN: JBCHA3; ISSN: 0021-9258

L2 ANSWER 6 OF 20 CAPLUS COPYRIGHT 2002 ACS
TI **Endosomal proteases** and antigen processing
SO Trends in Biochemical Sciences (1997), 22(10), 377-382
CODEN: TBSCDB; ISSN: 0376-5067

L2 ANSWER 7 OF 20 CAPLUS COPYRIGHT 2002 ACS
TI The characterization of endosomal insulin degradation intermediates and
their sequence of production
SO Biochemical Journal (1996), 320(3), 947-956
CODEN: BIJOAK; ISSN: 0264-6021

L2 ANSWER 8 OF 20 CAPLUS COPYRIGHT 2002 ACS
TI Endosomal proteolysis of internalized proteins
SO FEBS Lett. (1996), 389(1), 55-60
CODEN: FEBLAL; ISSN: 0014-5793

L2 ANSWER 9 OF 20 CAPLUS COPYRIGHT 2002 ACS
TI Induction of a cellular immune response to a defined T-cell epitope as an
insert in the flagellin of a live vaccine strain of Salmonella
SO Vaccine (1995), 13(3), 235-44
CODEN: VACCDE; ISSN: 0264-410X

L2 ANSWER 10 OF 20 CAPLUS COPYRIGHT 2002 ACS
TI Is antigen processing guided by major histocompatibility complex molecules?
SO FASEB J. (1994), 8(12), 974-8
CODEN: FAJOEC; ISSN: 0892-6638

L2 ANSWER 11 OF 20 CAPLUS COPYRIGHT 2002 ACS
TI Cell tropism of influenza virus mediated by hemagglutinin activation at
the stage of virus entry
SO Virology (1994), 203(2), 313-19
CODEN: VIRLAX; ISSN: 0042-6822

L2 ANSWER 12 OF 20 CAPLUS COPYRIGHT 2002 ACS
TI Processing of endogenously synthesized hen egg-white lysozyme retained in
the endoplasmic reticulum or in secretory form gives rise to a similar but
not identical set of epitopes recognized by class II-restricted T cells
SO J. Immunol. (1993), 151(7), 3576-86
CODEN: JOIMA3; ISSN: 0022-1767

L2 ANSWER 13 OF 20 CAPLUS COPYRIGHT 2002 ACS
TI Endosomal proteolysis precedes ricin A-chain toxicity in macrophages
SO Arch. Biochem. Biophys. (1993), 307(2), 225-30
CODEN: ABBIA4; ISSN: 0003-9861

L2 ANSWER 14 OF 20 CAPLUS COPYRIGHT 2002 ACS
TI Nucleosome: A major immunogen for pathogenic autoantibody-inducing T cells
of lupus
SO J. Exp. Med. (1993), 177(5), 1367-81
CODEN: JEMEAV; ISSN: 0022-1007

L2 ANSWER 15 OF 20 CAPLUS COPYRIGHT 2002 ACS
TI Inhibition of endosomal proteolytic activity by leupeptin blocks surface
expression of MHC class II molecules and their conversion to SDS resistant
.alpha..beta. heterodimers in endosomes
SO EMBO J. (1992), 11(2), 411-16
CODEN: EMJODG; ISSN: 0261-4189

L2 ANSWER 16 OF 20 CAPLUS COPYRIGHT 2002 ACS
TI The endo/lysosomal protease cathepsin B is able to process conalbumin
fragments for presentation to T cells
SO Immunology (1991), 74(3), 393-8
CODEN: IMMUAM; ISSN: 0019-2805

L2 ANSWER 17 OF 20 CAPLUS COPYRIGHT 2002 ACS
TI Antigen processing by **endosomal proteases** determines which sites of sperm-whale myoglobin are eventually recognized by T cells
SO Eur. J. Immunol. (1991), 21(9), 1989-96
CODEN: EJIMAF; ISSN: 0014-2980

L2 ANSWER 18 OF 20 CAPLUS COPYRIGHT 2002 ACS
TI Proteolytic cleavage of ricin A chain in endosomal vesicles. Evidence for
the action of **endosomal proteases** at both neutral and acidic pH
SO J. Biol. Chem. (1991), 266(33), 22091-5
CODEN: JBCHA3; ISSN: 0021-9258

L2 ANSWER 19 OF 20 CAPLUS COPYRIGHT 2002 ACS
TI Selective degradation of insulin within rat liver endosomes
SO J. Cell Biol. (1990), 110(1), 35-42
CODEN: JCLBA3; ISSN: 0021-9525

L2 ANSWER 20 OF 20 CAPLUS COPYRIGHT 2002 ACS
TI Cathepsin D is membrane-associated in macrophage endosomes
SO J. Biol. Chem. (1988), 263(14), 6901-7
CODEN: JBCHA3; ISSN: 0021-9258

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COST IN U.S. DOLLARS	ENTRY	SINCE FILE SESSION	TOTAL
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L3 3 ENDOSOMAL PROTEASE INHIBITOR

=> dup rem l3
PROCESSING COMPLETED FOR L3
L4 1 DUP REM L3 (2 DUPLICATES REMOVED)

=> s endosomal protease
L5 65 ENDOSOMAL PROTEASE

=> dup rem l5
PROCESSING COMPLETED FOR L5
L6 27 DUP REM L5 (38 DUPLICATES REMOVED)

=> d his

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L2 20 S ENDOSOMAL PROTEASE

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L3 3 S ENDOSOMAL PROTEASE INHIBITOR
L4 1 DUP REM L3 (2 DUPLICATES REMOVED)
L5 65 S ENDOSOMAL PROTEASE
L6 27 DUP REM L5 (38 DUPLICATES REMOVED)

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L1 5758 ADENO-ASSOCIATED

=> s hepatocyt?
L2 145665 HEPATOCYT?

=> s l1 and l2
L3 127 L1 AND L2

=> s improv? or augment? or potentiat? or facilitat? or enhanc? or

synergiz?
L4 3638007 IMPROV? OR AUGMENT? OR POTENTIAT? OR FACILITAT? OR ENHANC? OR
SYNERGIZ?

=> s l4(s)transduc?
L5 27262 L4(S) TRANSDUC?

=> s transduc?
L6 357779 TRANSDUC?

=> s l6(s)l4
L7 27262 L6(S) L4

=> s l3 and l7
L8 22 L3 AND L7

=> dup rem l8
PROCESSING COMPLETED FOR L8
L9 13 DUP REM L8 (9 DUPLICATES REMOVED)

=> d ti so 1-13

L9 ANSWER 1 OF 13 MEDLINE
TI Protamine sulfate **enhances** the **transduction** efficiency of recombinant **adeno-associated** virus-mediated gene delivery.
SO PHARMACEUTICAL RESEARCH, (2001 Jul) 18 (7) 922-7.
Journal code: 8406521. ISSN: 0724-8741.

L9 ANSWER 2 OF 13 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Recombinant **adeno-associated** viral vector mediated transduction of murine liver but not skeletal muscle is heavily influenced by gender.
SO Blood, (November 16, 2001) Vol. 98, No. 11 Part 1, pp. 425a. http://www.bloodjournal.org/. print.
Meeting Info.: 43rd Annual Meeting of the American Society of Hematology,
Part 1 Orlando, Florida, USA December 07-11, 2001
ISSN: 0006-4971.

L9 ANSWER 3 OF 13 MEDLINE DUPLICATE 1
TI Efficient and selective AAV2-mediated gene transfer directed to human vascular endothelial cells.
SO MOLECULAR THERAPY, (2001 Sep) 4 (3) 174-81.
Journal code: 100890581. ISSN: 1525-0016.

L9 ANSWER 4 OF 13 MEDLINE DUPLICATE 2
TI Regulated secretion of proinsulin/insulin from human hepatoma cells transduced by recombinant **adeno-associated** virus.
SO BIOTECHNOLOGY AND APPLIED BIOCHEMISTRY, (2001 Apr) 33 (Pt 2) 133-40.
Journal code: 8609465. ISSN: 0885-4513.

L9 ANSWER 5 OF 13 MEDLINE
TI AAV-mediated gene transfer for hemophilia.
SO ANNALS OF THE NEW YORK ACADEMY OF SCIENCES, (2001 Dec) 953 64-74. Ref: 29
Journal code: 7506858. ISSN: 0077-8923.

L9 ANSWER 6 OF 13 MEDLINE DUPLICATE 3
TI Recruitment of single-stranded recombinant **adeno-associated** virus vector genomes and intermolecular recombination are responsible for stable transduction of liver in vivo.
SO JOURNAL OF VIROLOGY, (2000 Oct) 74 (20) 9451-63.
Journal code: 0113724. ISSN: 0022-538X.

L9 ANSWER 7 OF 13 MEDLINE DUPLICATE 4
TI Nonrandom transduction of recombinant **adeno-associated** virus vectors in mouse **hepatocytes** in vivo: cell cycling does not influence **hepatocyte** transduction.
SO JOURNAL OF VIROLOGY, (2000 Apr) 74 (8) 3793-803.
Journal code: 0113724. ISSN: 0022-538X.

L9 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2002 ACS
TI Increasing the size of rAAV-mediated expression cassettes in vivo by intermolecular joining of two complementary vectors
SO Nature Biotechnology (2000), 18(5), 527-532
CODEN: NABIF9; ISSN: 1087-0156

L9 ANSWER 9 OF 13 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 5
TI Persistent hF.IX expression in mouse **hepatocytes** from episomal rAAV circular intermediates does not rely on the presence of AAV-ITR but the structure of expression cassette itself.
SO Blood, (November 16, 2000) Vol. 96, No. 11 Part 1, pp. 431a. print.
Meeting Info.: 42nd Annual Meeting of the American Society of Hematology
San Francisco, California, USA December 01-05, 2000 American Society of Hematology
. ISSN: 0006-4971.

L9 ANSWER 10 OF 13 CAPLUS COPYRIGHT 2002 ACS
TI **Adeno-associated** viral vector-mediated expression of factor VIII activity
SO PCT Int. Appl., 38 pp.
CODEN: PIXXD2

L9 ANSWER 11 OF 13 MEDLINE DUPLICATE 6
TI Persistent, therapeutically relevant levels of human granulocyte colony-stimulating factor in mice after systemic delivery of **adeno-associated** virus vectors.
SO HUMAN GENE THERAPY, (1999 Sep 1) 10 (13) 2133-40.
Journal code: 9008950. ISSN: 1043-0342.

L9 ANSWER 12 OF 13 MEDLINE DUPLICATE 7
TI **Adeno-associated** viral vector-mediated gene transfer of human blood coagulation factor IX into mouse liver.
SO BLOOD, (1998 Jun 15) 91 (12) 4600-7.
Journal code: 7603509. ISSN: 0006-4971.

L9 ANSWER 13 OF 13 MEDLINE DUPLICATE 8
TI Liver-directed gene transfer vectors.
SO HUMAN GENE THERAPY, (1998 Sep 20) 9 (14) 1975-81. Ref: 96
Journal code: 9008950. ISSN: 1043-0342.

=> d ibib ab 10

L9 ANSWER 10 OF 13 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:764174 CAPLUS
DOCUMENT NUMBER: 132:9629
TITLE: **Adeno-associated** viral vector-mediated expression of factor VIII activity
INVENTOR(S): Cohen, Lawrence K.; Spratt, S. Kaye; Couto, Linda
PATENT ASSIGNEE(S): Cell Genesys, Inc., USA
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9961595	A2	19991202	WO 1999-US10472	19990527
WO 9961595	A3	20000127		

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ,
DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS,
JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK,
MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ,
TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD,
RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,
ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,
CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
CA 2329143 AA 19991202 CA 1999-2329143 19990527
AU 9941856 A1 19991213 AU 1999-41856 19990527
EP 1082445 A2 20010314 EP 1999-925606 19990527
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, FI
JP 2002516345 T2 20020604 JP 2000-550980 19990527
PRIORITY APPLN. INFO.: US 1998-84423 A 19980527
WO 1999-US10472 W 19990527
AB The invention demonstrates that recombinant AAV (rAAV) vectors may be used
to deliver for effective expression a protein with Factor VIII function to
treat hemophilia A. The invention provides methods and materials for
expressing polypeptides with factor VIII activity comprising administering
at least two rAAV vectors encoding different domains of human factor VIII
and at least the heavy and light chains.

=> d his

(FILE 'HOME' ENTERED AT 11:20:30 ON 20 JUN 2002)

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 11:20:46 ON 20 JUN 2002
L1 5758 S ADENO-ASSOCIATED
L2 145665 S HEPATOCYT?
L3 127 S L1 AND L2
L4 3638007 S IMPROV? OR AUGMENT? OR POTENTIAT? OR FACILITAT? OR ENHANC? OR
L5 27262 S L4(S)TRANSDUC?
L6 357779 S TRANSDUC?
L7 27262 S L6(S)L4
L8 22 S L3 AND L7
L9 13 DUP REM L8 (9 DUPLICATES REMOVED)

=> log hold
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 32.20 32.41

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)
SINCE FILE TOTAL ENTRY SESSION
CA SUBSCRIBER PRICE -0.62 -0.62

SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 11:28:06 ON 20 JUN 2002

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1636DXS

PASSWORD:
* * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'MEDLINE, BIOSIS, CAPLUS' AT 11:36:12 ON 20 JUN 2002
FILE 'MEDLINE' ENTERED AT 11:36:12 ON 20 JUN 2002
FILE 'BIOSIS' ENTERED AT 11:36:12 ON 20 JUN 2002
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FILE 'CAPLUS' ENTERED AT 11:36:12 ON 20 JUN 2002
COPYRIGHT (C) 2002 AMERICAN CHEMICAL SOCIETY (ACS)

COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 32.20 32.41

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)
SINCE FILE TOTAL ENTRY SESSION
CA SUBSCRIBER PRICE -0.62 -0.62

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(FILE 'HOME' ENTERED AT 11:20:30 ON 20 JUN 2002)

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 11:20:46 ON 20 JUN 2002
L1 5758 S ADENO-ASSOCIATED
L2 145665 S HEPATOCYT?
L3 127 S L1 AND L2
L4 3638007 S IMPROV? OR AUGMENT? OR POTENTIAT? OR FACILITAT? OR ENHANC? OR
L5 27262 S L4(S)TRANSDUC?
L6 357779 S TRANSDUC?
L7 27262 S L6(S)L4
L8 22 S L3 AND L7
L9 13 DUP REM L8 (9 DUPLICATES REMOVED)

=> dup rem l3
PROCESSING COMPLETED FOR L3
L10 83 DUP REM L3 (44 DUPLICATES REMOVED)

=> l10 not py>1999
L10 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter "HELP COMMANDS" at an arrow prompt (=>).

=> s l10 not py>1999
L11 27 L10 NOT PY>1999

=> d ti so 1-27

L11 ANSWER 1 OF 27 MEDLINE
TI Persistent, therapeutically relevant levels of human granulocyte colony-stimulating factor in mice after systemic delivery of **adeno -associated** virus vectors.
SO HUMAN GENE THERAPY, (1999 Sep 1) 10 (13) 2133-40.
Journal code: 9008950. ISSN: 1043-0342.

L11 ANSWER 2 OF 27 MEDLINE
TI Detection of TTV DNA in hepatocellular carcinoma.
SO NIPPON RINSHO. JAPANESE JOURNAL OF CLINICAL MEDICINE, (1999 Jun) 57 (6)
1375-80. Ref: 11
Journal code: 0420546. ISSN: 0047-1852.

L11 ANSWER 3 OF 27 MEDLINE
TI Development of animal models for **adeno-associated** virus site-specific integration.
SO JOURNAL OF VIROLOGY, (1999 Mar) 73 (3) 2517-26.
Journal code: 0113724. ISSN: 0022-538X.

L11 ANSWER 4 OF 27 MEDLINE
TI **Adeno-associated** virus as a vector for liver-directed gene therapy.
SO JOURNAL OF VIROLOGY, (1998 Dec) 72 (12) 10222-6.
Journal code: 0113724. ISSN: 0022-538X.

L11 ANSWER 5 OF 27 MEDLINE
TI Liver-directed gene transfer vectors.
SO HUMAN GENE THERAPY, (1998 Sep 20) 9 (14) 1975-81. Ref: 96
Journal code: 9008950. ISSN: 1043-0342.

L11 ANSWER 6 OF 27 MEDLINE
TI Ribozyme gene therapy for hepatitis C virus infection.
SO CLINICAL AND DIAGNOSTIC VIROLOGY, (1998 Jul 15) 10 (2-3) 163-71.
Journal code: 9309653. ISSN: 0928-0197.

L11 ANSWER 7 OF 27 MEDLINE
TI **Adeno-associated** viral vector-mediated gene transfer of human blood coagulation factor IX into mouse liver.
SO BLOOD, (1998 Jun 15) 91 (12) 4600-7.
Journal code: 7603509. ISSN: 0006-4971.

L11 ANSWER 8 OF 27 MEDLINE
TI Site-specific integration in mammalian cells mediated by a new hybrid baculovirus-**adeno-associated** virus vector.
SO JOURNAL OF VIROLOGY, (1998 Jun) 72 (6) 5025-34.
Journal code: 0113724. ISSN: 0022-538X.

L11 ANSWER 9 OF 27 MEDLINE
TI Persistent and therapeutic concentrations of human factor IX in mice after hepatic gene transfer of recombinant AAV vectors.
SO NATURE GENETICS, (1997 Jul) 16 (3) 270-6.
Journal code: 9216904. ISSN: 1061-4036.

L11 ANSWER 10 OF 27 MEDLINE
TI **Adeno-associated** virus 2-mediated gene transfer in vivo: organ-tropism and expression of transduced sequences in mice.
SO GENE, (1997 Apr 29) 190 (1) 203-10.
Journal code: 7706761. ISSN: 0378-1119.

L11 ANSWER 11 OF 27 MEDLINE
TI Persistent expression of human clotting factor IX from mouse liver after intravenous injection of **adeno-associated** virus vectors.
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (1997 Feb 18) 94 (4) 1426-31.
Journal code: 7505876. ISSN: 0027-8424.

L11 ANSWER 12 OF 27 MEDLINE
TI Comparison of retroviral and **adeno-associated** viral vectors designed to express human clotting factor IX.
SO HUMAN GENE THERAPY, (1997 Jan 20) 8 (2) 125-35.
Journal code: 9008950. ISSN: 1043-0342.

L11 ANSWER 13 OF 27 MEDLINE
TI The Rep68 protein of **adeno-associated** virus type 2 stimulates expression of the platelet-derived growth factor B c-sis proto-oncogene.
SO JOURNAL OF VIROLOGY, (1996 Jul) 70 (7) 4783-6.
Journal code: 0113724. ISSN: 0022-538X.

L11 ANSWER 14 OF 27 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI **Adeno-associated** virus(AAV)-mediated expression of ornithine transcarbamylase (OTC) in OTC deficient spf-ash mMice.
SO Pediatric Research, (April, 1999) Vol. 45, No. 4 PART 2, pp. 142A.
Meeting Info.: Annual Meeting of the American Pediatric Society and the
Society for Pediatric Research San Francisco, California, USA May 1-4,
1999
ISSN: 0031-3998.

L11 ANSWER 15 OF 27 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Defective adenoassociated viral-mediated transfection of insulin gene by direct injection into liver parenchyma decreases blood glucose of diabetic mice.
SO Hormone and Metabolic Research, (Dec., 1997) Vol. 29, No. 12, pp. 599-603.
ISSN: 0018-5043.

L11 ANSWER 16 OF 27 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Gene transfer into **hepatocytes** mediated by helper virus-free HSV/AAV hybrid vectors.
SO Molecular Medicine (New York), (Dec., 1997) Vol. 3, No. 12, pp. 813-825.
ISSN: 1076-1551.

L11 ANSWER 17 OF 27 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI **Adeno-associated** virus (AAV) as a gene delivery vector for liver-cells.
SO Hepatology, (1997) Vol. 26, No. 4 PART 2, pp. 197A.
Meeting Info.: 48th Annual Meeting of the American Association for the Study of Liver Diseases Chicago, Illinois, USA November 7-11, 1997
ISSN: 0270-9139.

L11 ANSWER 18 OF 27 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Long-term expression of human factor IX from mouse **hepatocytes** after intravenous injection of AAV vectors.
SO American Journal of Human Genetics, (1996) Vol. 59, No. 4 SUPPL., pp. A46.
Meeting Info.: 46th Annual Meeting of the American Society of Human Genetics San Francisco, California, USA October 29-November 2, 1996
ISSN: 0002-9297.

L11 ANSWER 19 OF 27 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Transduction of **hepatocytes** in vivo with **adeno-associated** virus vectors as a model for hepatic gene therapy.
SO American Journal of Human Genetics, (1995) Vol. 57, No. 4 SUPPL., pp. A43.
Meeting Info.: 45th Annual Meeting of the American Society of Human Genetics Minneapolis, Minnesota, USA October 24-28, 1995
ISSN: 0002-9297.

L11 ANSWER 20 OF 27 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI **ADENO-ASSOCIATED** VIRUS-MEDIATED TRANSDUCTION OF ORNITHINE TRANSCARBAMYLASE ACTIVITY INTO PRIMARY **HEPATOCYTES** DERIVED FROM SPF MICE.
SO KEYSTONE SYMPOSIUM ON GENE TRANSFER, REPLACEMENT AND AUGMENTATION, COPPER MOUNTAIN, COLORADO, USA, APRIL 3-9, 1992. J CELL BIOCHEM SUPPL. (1992) 0 (16 PART F), 60.
CODEN: JCBSD7.

L11 ANSWER 21 OF 27 CAPLUS COPYRIGHT 2002 ACS

TI Electrically mediated cellular expression of genetic material at a target
body area
SO PCT Int. Appl., 26 pp.
CODEN: PIXXD2

L11 ANSWER 22 OF 27 CAPLUS COPYRIGHT 2002 ACS
TI **Hepatocyte** transfection using bcl2 to protect transformed cells from selection with apoptotic agents
SO PCT Int. Appl., 39 pp.
CODEN: PIXXD2

L11 ANSWER 23 OF 27 CAPLUS COPYRIGHT 2002 ACS
TI **Adeno-associated** viral vector-mediated delivery of DNA to cells of the liver
SO PCT Int. Appl., 64 pp.
CODEN: PIXXD2

L11 ANSWER 24 OF 27 CAPLUS COPYRIGHT 2002 ACS
TI The kinetics of rAAV integration in the liver
SO Nature Genetics (1998), 19(1), 13-15
CODEN: NGENEC; ISSN: 1061-4036

L11 ANSWER 25 OF 27 CAPLUS COPYRIGHT 2002 ACS
TI Use of a non-mammalian DNA virus to express an exogenous gene in a
mammalian cell for gene therapy in treatment of gene deficiency disorder
or liver cancer
SO PCT Int. Appl., 77 pp.
CODEN: PIXXD2

L11 ANSWER 26 OF 27 CAPLUS COPYRIGHT 2002 ACS
TI Gene therapy vectors carrying lipase genes for treatment of lipoproteinemias
SO PCT Int. Appl., 40 pp.
CODEN: PIXXD2

L11 ANSWER 27 OF 27 CAPLUS COPYRIGHT 2002 ACS
TI Methods of suppressing autoimmune response
SO PCT Int. Appl., 44 pp.
CODEN: PIXXD2

=> d ibib ab 23

L11 ANSWER 23 OF 27 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:394246 CAPLUS
DOCUMENT NUMBER: 129:58783
TITLE: **Adeno-associated** viral vector-mediated delivery of DNA to cells of the liver
INVENTOR(S): Snyder, Richard; Danos, Olivier; Cohen, Lawrence; Kay, Mark; Thompson, Arthur R.
PATENT ASSIGNEE(S): Somatix Therapy Corporation, USA; University of Washington; Snyder, Richard; Danos, Olivier; Cohen, Lawrence; Kay, Mark; Thompson, Arthur R.
SOURCE: PCT Int. Appl., 64 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9824479	A1	19980611	WO 1997-US21398	19971202

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

AU 9855882	A1	19980629	AU 1998-55882	19971202

PRIORITY APPLN. INFO.: US 1996-32506P P 19961202
US 1997-882044 A 19970625
WO 1997-US21398 W 19971202
AB The instant invention provides methods of expressing polynucleotides in the cells of the liver comprising administering viral particles comprising a recombinant AAV vector into a mammal, preferably a human.

=> d his

(FILE 'HOME' ENTERED AT 11:20:30 ON 20 JUN 2002)

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 11:20:46 ON 20 JUN 2002
L1 5758 S ADENO-ASSOCIATED
L2 145665 S HEPATOCYT?
L3 127 S L1 AND L2
L4 3638007 S IMPROV? OR AUGMENT? OR POTENTIAT? OR FACILITAT? OR ENHANC? OR
L5 27262 S L4(S)TRANSDUC?
L6 357779 S TRANSDUC?
L7 27262 S L6(S)L4
L8 22 S L3 AND L7
L9 13 DUP REM L8 (9 DUPLICATES REMOVED)
L10 83 DUP REM L3 (44 DUPLICATES REMOVED)
L11 27 S L10 NOT PY>1999

=> log hold

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	57.93	58.14

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-1.24	-1.24

SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 11:40:28 ON 20 JUN 2002